

Appendix C-4:
Future Year 2035 Alternative 2 Level of Service Worksheets



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↑↑	↗		↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95	1.00		0.95	1.00
Frt	1.00	0.97		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	1583	4415		1583	4538			3151	1417		3151	1417
Flt Permitted	0.12	1.00		0.95	1.00			0.64	1.00		0.64	1.00
Satd. Flow (perm)	204	4415		1583	4538			2038	1417		2041	1417
Volume (vph)	99	1471	364	73	1711	30	93	835	130	87	810	595
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	104	1548	383	77	1801	32	98	879	137	92	853	626
RTOR Reduction (vph)	0	46	0	0	2	0	0	0	78	0	0	3
Lane Group Flow (vph)	104	1885	0	77	1831	0	0	977	59	0	945	623
Turn Type	Perm		Prot		Perm		Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	6		5		2		8		4		4	
Permitted Phases	6						8		4		4	
Actuated Green, G (s)	32.6	32.6		6.4	43.0			38.5	38.5		38.5	38.5
Effective Green, g (s)	32.6	32.6		6.4	43.0			39.0	39.0		39.0	39.0
Actuated g/C Ratio	0.36	0.36		0.07	0.48			0.43	0.43		0.43	0.43
Clearance Time (s)	4.0	4.0		4.0	4.0			4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	74	1599		113	2168			883	614		884	614
v/s Ratio Prot		0.43		0.05	c0.40							
v/s Ratio Perm	c0.51							c0.48	0.04		0.46	0.44
v/c Ratio	1.41	1.18		0.68	0.84			1.11	0.10		1.07	1.01
Uniform Delay, d1	28.7	28.7		40.8	20.6			25.5	15.1		25.5	25.5
Progression Factor	1.39	1.44		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	215.6	83.8		15.6	4.3			63.8	0.3		50.5	39.9
Delay (s)	255.5	125.1		56.4	24.8			89.3	15.4		76.0	65.4
Level of Service	F	F		E	C			F	B		E	E
Approach Delay (s)		131.7			26.1			80.2			71.7	
Approach LOS		F			C			F			E	

Intersection Summary

HCM Average Control Delay	78.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	117.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: 6th St & Western Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔↔			↔↔	↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0			4.0			4.0	4.0
Lane Util. Factor		0.95			0.95			0.95			0.95	1.00
Frbp, ped/bikes		1.00			0.99			0.99			1.00	0.83
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		0.99			0.99			0.99			1.00	0.85
Flt Protected		1.00			1.00			1.00			1.00	1.00
Satd. Flow (prot)		3127			3084			3125			3167	1171
Flt Permitted		1.00			1.00			1.00			1.00	1.00
Satd. Flow (perm)		3127			3084			3125			3167	1171
Volume (vph)	0	1071	60	0	1097	94	0	1409	69	0	1687	116
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	1082	61	0	1108	95	0	1423	70	0	1704	117
RTOR Reduction (vph)	0	2	0	0	5	0	0	4	0	0	0	14
Lane Group Flow (vph)	0	1141	0	0	1198	0	0	1489	0	0	1704	103
Confl. Peds. (#/hr)	76		47	47		76	70		83	83		70
Confl. Bikes (#/hr)			7			7			12			9
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)		40.2			40.2			40.2			40.2	40.2
Effective Green, g (s)		41.0			41.0			41.0			41.0	41.0
Actuated g/C Ratio		0.46			0.46			0.46			0.46	0.46
Clearance Time (s)		4.8			4.8			4.8			4.8	4.8
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1425			1405			1424			1443	533
v/s Ratio Prot		0.36			c0.39			0.48			c0.54	
v/s Ratio Perm												0.09
v/c Ratio		0.80			0.85			1.05			1.18	0.19
Uniform Delay, d1		21.0			21.8			24.5			24.5	14.6
Progression Factor		1.00			1.00			0.58			1.00	1.00
Incremental Delay, d2		4.8			6.7			22.9			88.9	0.8
Delay (s)		25.8			28.5			37.2			113.4	15.4
Level of Service		C			C			D			F	B
Approach Delay (s)		25.8			28.5			37.2			107.1	
Approach LOS		C			C			D			F	

Intersection Summary			
HCM Average Control Delay	55.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	111.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↗		↖	↕↕↗		↖	↕↗		↖	↕↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4479		1583	4489		1583	3133		1583	3019	
Flt Permitted	0.14	1.00		0.14	1.00		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	228	4479		230	4489		230	3133		230	3019	
Volume (vph)	201	1355	62	132	1718	44	244	1156	26	198	1306	204
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	216	1457	67	142	1847	47	262	1243	28	213	1404	219
RTOR Reduction (vph)	0	5	0	0	3	0	0	2	0	0	14	0
Lane Group Flow (vph)	216	1519	0	142	1891	0	262	1269	0	213	1609	0
Conf. Peds. (#/hr)	529		124	124		529	153		349	349		153
Conf. Bikes (#/hr)			4			6			8			9
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	35.8	27.8		35.4	27.6		35.8	27.8		35.8	27.8	
Effective Green, g (s)	37.2	29.2		36.8	29.0		37.0	29.0		37.0	29.0	
Actuated g/C Ratio	0.41	0.32		0.41	0.32		0.41	0.32		0.41	0.32	
Clearance Time (s)	4.0	5.4		4.0	5.4		4.0	5.2		4.0	5.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	215	1453		211	1446		215	1010		215	973	
v/s Ratio Prot	c0.09	0.34		0.06	c0.42		c0.11	0.41		0.09	c0.53	
v/s Ratio Perm	0.33			0.22			0.39			0.32		
v/c Ratio	1.00	1.05		0.67	1.31		1.22	1.26		0.99	1.65	
Uniform Delay, d1	23.3	30.4		20.7	30.5		43.2	30.5		43.2	30.5	
Progression Factor	1.89	0.93		0.90	0.90		1.15	1.17		1.61	1.45	
Incremental Delay, d2	39.9	28.5		3.5	140.8		109.6	117.7		16.2	294.8	
Delay (s)	83.8	56.6		22.2	168.1		159.2	153.4		85.6	339.0	
Level of Service	F	E		C	F		F	F		F	F	
Approach Delay (s)		60.0			157.9			154.4			309.6	
Approach LOS		E			F			F			F	

Intersection Summary

HCM Average Control Delay	172.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	127.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.97		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3121		1583	3056		1583	3158		1583	3156	
Flt Permitted	0.31	1.00		0.29	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	525	3121		487	3056		163	3158		163	3156	
Volume (vph)	57	583	61	64	465	141	40	1334	25	134	1482	34
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	64	655	69	72	522	158	45	1499	28	151	1665	38
RTOR Reduction (vph)	0	4	0	0	7	0	0	2	0	0	2	0
Lane Group Flow (vph)	64	720	0	72	673	0	45	1525	0	151	1701	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	8			4			6			2		
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	40.4	40.4		40.4	40.4		40.3	40.3		40.3	40.3	
Effective Green, g (s)	41.0	41.0		41.0	41.0		41.0	41.0		41.0	41.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46		0.46	0.46		0.46	0.46	
Clearance Time (s)	4.6	4.6		4.6	4.6		4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	239	1422		222	1392		74	1439		74	1438	
v/s Ratio Prot	c0.23			0.22			0.48			0.54		
v/s Ratio Perm	0.12			0.15			0.28			c0.93		
v/c Ratio	0.27	0.51		0.32	0.48		0.61	1.06		2.04	1.18	
Uniform Delay, d1	15.2	17.3		15.7	17.1		18.5	24.5		24.5	24.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.66	0.67	
Incremental Delay, d2	2.7	1.3		3.8	1.2		32.0	41.4		472.5	83.1	
Delay (s)	17.9	18.6		19.5	18.3		50.4	65.9		488.7	99.6	
Level of Service	B			B			D			F		
Approach Delay (s)	18.6			18.4			65.5			131.3		
Approach LOS	B			B			E			F		

Intersection Summary

HCM Average Control Delay	75.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕↕↕		↗	↕↕↕		↗	↕↕	↗	↗	↕↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4517		1583	4506		1583	3167	1417	1583	3167	1417
Flt Permitted	0.11	1.00		0.12	1.00		0.12	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	186	4517		192	4506		196	3167	1417	187	3167	1417
Volume (vph)	71	1914	97	74	1764	121	90	1118	49	127	1305	132
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	73	1973	100	76	1819	125	93	1153	51	131	1345	136
RTOR Reduction (vph)	0	5	0	0	8	0	0	0	30	0	0	46
Lane Group Flow (vph)	73	2068	0	76	1936	0	93	1153	21	131	1345	90
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases	6			2			8		8	4		4
Actuated Green, G (s)	42.3	34.9		39.9	33.7		39.3	33.0	39.2	42.5	34.6	42.0
Effective Green, g (s)	43.3	35.9		40.9	34.7		40.3	34.0	40.2	43.5	35.6	43.0
Actuated g/C Ratio	0.43	0.36		0.41	0.35		0.40	0.34	0.40	0.44	0.36	0.43
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	184	1622		165	1564		166	1077	626	192	1127	666
v/s Ratio Prot	c0.03	c0.46		0.03	0.43		0.04	0.36	0.00	c0.05	c0.42	0.01
v/s Ratio Perm	0.14			0.16			0.19		0.01	0.24		0.05
v/c Ratio	0.40	1.27		0.46	1.24		0.56	1.07	0.03	0.68	1.19	0.14
Uniform Delay, d1	23.3	32.0		24.4	32.6		24.7	33.0	18.1	22.7	32.2	17.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	128.6		2.0	112.8		4.3	48.4	0.0	9.6	96.0	0.1
Delay (s)	24.7	160.7		26.4	145.4		29.0	81.4	18.1	32.3	128.2	17.3
Level of Service	C	F		C	F		C	F	B	C	F	B
Approach Delay (s)		156.1			140.9			75.1			111.0	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	126.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶		↶	↶↶		↶	↶↶	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4513		1583	4512		1583	3135		1583	3059	
Flt Permitted	0.09	1.00		0.09	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	152	4513		152	4512		175	3135		175	3059	
Volume (vph)	203	1785	103	139	2056	121	117	1028	74	84	1233	360
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	214	1879	108	146	2164	127	123	1082	78	88	1298	379
RTOR Reduction (vph)	0	7	0	0	7	0	0	3	0	0	1	0
Lane Group Flow (vph)	214	1980	0	146	2284	0	123	1157	0	88	1676	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	6			2			8			4		
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	43.5	43.5		43.5	43.5		37.5	37.5		37.5	37.5	
Effective Green, g (s)	44.0	44.0		44.0	44.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.49	0.49		0.49	0.49		0.42	0.42		0.42	0.42	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	2206		74	2206		74	1324		74	1292	
v/s Ratio Prot		0.44			0.51			0.37			0.55	
v/s Ratio Perm	c1.41			0.96			c0.70			0.50		
v/c Ratio	2.89	0.90		1.97	1.04		1.66	0.87		1.19	1.30	
Uniform Delay, d1	23.0	20.9		23.0	23.0		26.0	23.8		26.0	26.0	
Progression Factor	1.44	1.48		1.19	1.19		1.00	1.00		1.00	1.00	
Incremental Delay, d2	872.5	3.8		442.2	17.8		350.0	8.2		164.3	139.5	
Delay (s)	905.6	34.9		469.5	45.2		376.0	32.0		190.3	165.5	
Level of Service	F	C		F	D		F	C		F	F	
Approach Delay (s)		119.5			70.7			65.0			166.8	
Approach LOS		F			E			E			F	

Intersection Summary

HCM Average Control Delay	105.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.32		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	132.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↑	↗		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		1.00	
Satd. Flow (prot)	1583	4535		1583	4528			1638	1417		1576	
Flt Permitted	0.07	1.00		0.07	1.00			0.65	1.00		0.97	
Satd. Flow (perm)	110	4535		110	4528			1076	1417		1538	
Volume (vph)	32	1925	42	91	2461	83	66	123	127	13	112	77
Peak-hour factor, PHF	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Adj. Flow (vph)	41	2437	53	115	3115	105	84	156	161	16	142	97
RTOR Reduction (vph)	0	2	0	0	3	0	0	0	2	0	1	0
Lane Group Flow (vph)	41	2488	0	115	3217	0	0	240	159	0	254	0
Turn Type	Perm		Perm		Perm		Perm		Perm	Perm		
Protected Phases	6		2		2		8		8	4		
Permitted Phases	6		2		8		8		8	4		
Actuated Green, G (s)	60.6	60.6		60.6	60.6			20.9	20.9		20.9	
Effective Green, g (s)	60.6	60.6		60.6	60.6			21.4	21.4		21.4	
Actuated g/C Ratio	0.67	0.67		0.67	0.67			0.24	0.24		0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.5	4.5		4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	74	3054		74	3049			256	337		366	
v/s Ratio Prot		0.55			0.71							
v/s Ratio Perm	0.37			c1.05				c0.22	0.11		0.17	
v/c Ratio	0.55	0.81		1.55	1.06			0.94	0.47		0.69	
Uniform Delay, d1	7.7	10.6		14.7	14.7			33.6	29.4		31.3	
Progression Factor	1.00	1.00		1.12	1.14			1.00	1.00		1.00	
Incremental Delay, d2	26.7	2.5		276.9	29.1			39.2	1.0		5.6	
Delay (s)	34.3	13.2		293.3	45.9			72.8	30.5		36.9	
Level of Service	C	B		F	D			E	C		D	
Approach Delay (s)		13.5			54.5			55.8			36.9	
Approach LOS		B			D			E			D	

Intersection Summary

























HCM Average Control Delay	38.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵↵↵	↵
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.91
Frbp, ped/bikes	0.98		1.00	1.00	0.96	0.90
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	0.97	0.85
Flt Protected	1.00		0.95	1.00	0.96	1.00
Satd. Flow (prot)	4355		1583	4550	2897	1155
Flt Permitted	1.00		0.09	1.00	0.96	1.00
Satd. Flow (perm)	4355		154	4550	2897	1155
Volume (vph)	1450	234	636	1826	654	584
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1510	244	662	1902	681	608
RTOR Reduction (vph)	24	0	0	0	30	2
Lane Group Flow (vph)	1730	0	662	1902	843	414
Conf. Peds. (#/hr)		153	153			100
Conf. Bikes (#/hr)						2
Turn Type			pm+pt		pm+ov	
Protected Phases	6		5	2	4	5
Permitted Phases			2			4
Actuated Green, G (s)	38.2		51.2	51.2	29.1	38.1
Effective Green, g (s)	39.2		52.2	52.2	29.8	38.8
Actuated g/C Ratio	0.44		0.58	0.58	0.33	0.43
Clearance Time (s)	5.0		4.0	5.0	4.7	4.0
Vehicle Extension (s)	3.0		2.0	3.0	2.0	2.0
Lane Grp Cap (vph)	1897		232	2639	959	549
v/s Ratio Prot	0.40		c0.29	0.42	c0.29	0.08
v/s Ratio Perm			c1.37			0.28
v/c Ratio	0.91		2.85	0.72	0.88	0.75
Uniform Delay, d1	23.8		24.6	13.6	28.4	21.6
Progression Factor	1.00		1.00	1.00	0.45	0.25
Incremental Delay, d2	8.1		845.8	1.7	7.2	4.1
Delay (s)	31.9		870.4	15.4	20.1	9.6
Level of Service	C		F	B	C	A
Approach Delay (s)	31.9			236.1	16.7	
Approach LOS	C			F	B	

Intersection Summary

HCM Average Control Delay	121.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.09		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		 						 			 		
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95		
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.98		1.00	1.00		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1583	3160		1583	1667	1417	1583	3108		1583	3163		
Flt Permitted	0.39	1.00		0.49	1.00	1.00	0.29	1.00		0.15	1.00		
Satd. Flow (perm)	655	3160		815	1667	1417	478	3108		243	3163		
Volume (vph)	7	320	5	212	288	105	131	1092	153	26	809	7	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Adj. Flow (vph)	7	333	5	221	300	109	136	1138	159	27	843	7	
RTOR Reduction (vph)	0	0	0	0	0	64	0	12	0	0	1	0	
Lane Group Flow (vph)	7	338	0	221	300	45	136	1285	0	27	849	0	
Turn Type	Perm			Perm			Perm	Perm		Perm			
Protected Phases	8			4			6			2			
Permitted Phases	8			4			6			2			
Actuated Green, G (s)	26.4	26.4		26.4	26.4	26.4	54.3	54.3		54.3	54.3		
Effective Green, g (s)	27.0	27.0		27.0	27.0	27.0	55.0	55.0		55.0	55.0		
Actuated g/C Ratio	0.30	0.30		0.30	0.30	0.30	0.61	0.61		0.61	0.61		
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.7	4.7		4.7	4.7		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	197	948		245	500	425	292	1899		149	1933		
v/s Ratio Prot		0.11			0.18			c0.41			0.27		
v/s Ratio Perm	0.01			c0.27		0.03	0.28			0.11			
v/c Ratio	0.04	0.36		0.90	0.60	0.10	0.47	0.68		0.18	0.44		
Uniform Delay, d1	22.3	24.7		30.2	26.9	22.8	9.5	11.6		7.7	9.3		
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.66	1.88		0.28	0.37		
Incremental Delay, d2	0.3	1.0		36.8	5.2	0.5	0.5	0.2		0.2	0.1		
Delay (s)	22.6	25.7		67.1	32.1	23.3	16.3	21.9		2.4	3.5		
Level of Service	C			E		C		B		C		A	
Approach Delay (s)		25.7		42.9			21.4			3.5			
Approach LOS		C		D			C			A			
Intersection Summary													
HCM Average Control Delay			21.2			HCM Level of Service				C			
HCM Volume to Capacity ratio			0.75										
Actuated Cycle Length (s)			90.0			Sum of lost time (s)				8.0			
Intersection Capacity Utilization			86.1%			ICU Level of Service				E			
Analysis Period (min)			15										
c Critical Lane Group													



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕		↖	↕↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4506		1583	4535		1583	3153		1583	3167	1417
Flt Permitted	0.15	1.00		0.95	1.00		0.13	1.00		0.16	1.00	1.00
Satd. Flow (perm)	248	4506		1583	4535		224	3153		259	3167	1417
Volume (vph)	70	1736	120	140	2681	58	199	1259	38	58	1133	148
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	77	1908	132	154	2946	64	219	1384	42	64	1245	163
RTOR Reduction (vph)	0	8	0	0	3	0	0	2	0	0	0	110
Lane Group Flow (vph)	77	2032	0	154	3007	0	219	1424	0	64	1245	53
Turn Type	pm+pt		Prot		pm+pt		pm+pt		pm+pt		Perm	
Protected Phases	5	2		1	6		7	4		3	8	8
Permitted Phases	2					4				8		8
Actuated Green, G (s)	31.3	26.0		11.1	30.9		39.5	29.5		30.7	24.7	24.7
Effective Green, g (s)	32.6	26.9		10.6	31.8		40.5	30.5		31.7	25.7	25.7
Actuated g/C Ratio	0.36	0.30		0.12	0.35		0.45	0.34		0.35	0.29	0.29
Clearance Time (s)	4.4	4.9		3.5	4.9		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	174	1347		186	1602		264	1069		179	904	405
v/s Ratio Prot	0.03	0.45		c0.10	c0.66		c0.10	c0.45		0.02	0.39	
v/s Ratio Perm	0.13					0.27				0.10		0.04
v/c Ratio	0.44	1.51		0.83	1.88		0.83	1.33		0.36	1.38	0.13
Uniform Delay, d1	23.3	31.6		38.8	29.1		40.4	29.8		40.9	32.1	23.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.85	0.78	0.52
Incremental Delay, d2	1.8	232.6		25.1	397.2		18.9	155.9		1.2	176.3	0.6
Delay (s)	25.1	264.2		63.9	426.3		59.4	185.7		36.1	201.2	12.9
Level of Service	C			E			E			D		F
Approach Delay (s)	255.5			408.6			168.9			173.2		
Approach LOS	F			F			F			F		

Intersection Summary

HCM Average Control Delay	281.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	124.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↑	↗		↖	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.99	1.00
Satd. Flow (prot)	1583	4523		1583	4538			1626	1417		1651	1417
Flt Permitted	0.09	1.00		0.09	1.00			0.98	1.00		0.99	1.00
Satd. Flow (perm)	147	4523		147	4538			1626	1417		1651	1417
Volume (vph)	23	1565	64	50	2244	40	142	139	20	34	141	50
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	24	1613	66	52	2313	41	146	143	21	35	145	52
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	16	0	0	45
Lane Group Flow (vph)	24	1679	0	52	2352	0	0	289	5	0	180	7
Turn Type	Perm		Perm		Split		Perm		Split		Perm	
Protected Phases	6		2		4		4		3		3	
Permitted Phases	6		2				4				3	
Actuated Green, G (s)	43.6	43.6		43.6	43.6			19.0	19.0		10.5	10.5
Effective Green, g (s)	45.5	45.5		45.5	45.5			20.5	20.5		12.0	12.0
Actuated g/C Ratio	0.51	0.51		0.51	0.51			0.23	0.23		0.13	0.13
Clearance Time (s)	5.9	5.9		5.9	5.9			5.5	5.5		5.5	5.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	74	2287		74	2294			370	323		220	189
v/s Ratio Prot		0.37			c0.52			c0.18			c0.11	
v/s Ratio Perm	0.16			0.35				0.00				0.00
v/c Ratio	0.32	0.73		0.70	1.03			0.78	0.01		0.82	0.04
Uniform Delay, d1	13.2	17.5		17.1	22.2			32.6	26.9		37.9	34.0
Progression Factor	0.66	0.56		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	7.8	1.5		43.4	25.6			10.3	0.0		20.5	0.1
Delay (s)	16.5	11.2		60.5	47.8			42.9	26.9		58.4	34.0
Level of Service	B	B		E	D			D	C		E	C
Approach Delay (s)		11.3			48.1			41.8			53.0	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.98			0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.97	1.00
Satd. Flow (prot)	1583	4544		1583	4479			1620			1618	1417
Flt Permitted	0.10	1.00		0.12	1.00			0.99			0.97	1.00
Satd. Flow (perm)	163	4544		195	4479			1620			1618	1417
Volume (vph)	91	1336	12	16	2047	239	44	142	28	274	177	268
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	93	1363	12	16	2089	244	45	145	29	280	181	273
RTOR Reduction (vph)	0	1	0	0	16	0	0	6	0	0	0	96
Lane Group Flow (vph)	93	1374	0	16	2317	0	0	213	0	0	461	177
Turn Type	Perm		Perm		Split		Split		Split		Perm	
Protected Phases	6		2		3		3		4		4	
Permitted Phases	6		2								4	
Actuated Green, G (s)	39.5	39.5		39.5	39.5			9.6			25.0	25.0
Effective Green, g (s)	41.0	41.0		41.0	41.0			11.0			26.0	26.0
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.12			0.29	0.29
Clearance Time (s)	5.5	5.5		5.5	5.5			5.4			5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	74	2070		89	2040			198			467	409
v/s Ratio Prot		0.30			0.52			c0.13			c0.28	
v/s Ratio Perm	c0.57			0.08								0.12
v/c Ratio	1.26	0.66		0.18	1.14			1.08			0.99	0.43
Uniform Delay, d1	24.5	19.1		14.5	24.5			39.5			31.8	26.0
Progression Factor	1.00	1.00		1.42	1.17			1.00			1.00	1.00
Incremental Delay, d2	188.5	1.7		1.0	62.8			85.3			37.9	0.7
Delay (s)	213.0	20.8		21.6	91.4			124.8			69.8	26.7
Level of Service	F	C		C	F			F			E	C
Approach Delay (s)		33.0			90.9			124.8			53.8	
Approach LOS		C			F			F			D	

Intersection Summary

HCM Average Control Delay	68.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	112.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: Wilshire Blvd & Sycamore Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑↑↑		↑	↑↑↑			↑			↑		
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0		
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00		
Frbp, ped/bikes		0.99		1.00	1.00			0.99			0.99		
Flpb, ped/bikes		1.00		0.99	1.00			1.00			1.00		
Frt		0.99		1.00	1.00			0.94			0.96		
Flt Protected		1.00		0.95	1.00			0.98			1.00		
Satd. Flow (prot)		4230		1476	4265			1427			1485		
Flt Permitted		1.00		0.15	1.00			0.72			0.98		
Satd. Flow (perm)		4230		231	4265			1051			1461		
Volume (vph)	0	1331	66	44	2022	37	52	21	54	9	95	50	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	0	1416	70	47	2151	39	55	22	57	10	101	53	
RTOR Reduction (vph)	0	4	0	0	1	0	0	28	0	0	5	0	
Lane Group Flow (vph)	0	1482	0	47	2189	0	0	106	0	0	159	0	
Conf. Peds. (#/hr)	25		36	36		25	8		5	5		8	
Conf. Bikes (#/hr)			5			4							
Turn Type				Perm			Perm			Perm			
Protected Phases		6			2			8			4		
Permitted Phases				2			8			4			
Actuated Green, G (s)		66.6		66.6	66.6			15.9			15.9		
Effective Green, g (s)		66.1		66.1	66.1			15.9			15.9		
Actuated g/C Ratio		0.73		0.73	0.73			0.18			0.18		
Clearance Time (s)		3.5		3.5	3.5			4.0			4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0		
Lane Grp Cap (vph)		3107		170	3132			186			258		
v/s Ratio Prot		0.35			c0.51								
v/s Ratio Perm				0.20				0.10			c0.11		
v/c Ratio		0.48		0.28	0.70			0.57			0.62		
Uniform Delay, d1		4.9		4.0	6.5			33.9			34.2		
Progression Factor		0.31		1.00	1.00			1.00			1.00		
Incremental Delay, d2		0.0		4.0	1.3			4.0			4.3		
Delay (s)		1.6		8.0	7.8			37.9			38.6		
Level of Service		A		A	A			D			D		
Approach Delay (s)		1.6			7.8			37.9			38.6		
Approach LOS		A			A			D			D		
Intersection Summary													
HCM Average Control Delay			7.8									HCM Level of Service	A
HCM Volume to Capacity ratio			0.68										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			80.0%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑	↗	↖	↑↑		↖	↑↑↗		↖	↑↑↗	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2980	1333	1490	2974		1490	4259		1490	4217	
Flt Permitted	0.13	1.00	1.00	0.13	1.00		0.13	1.00		0.13	1.00	
Satd. Flow (perm)	208	2980	1333	198	2974		211	4259		200	4217	
Volume (vph)	70	999	51	171	1668	24	90	1659	64	127	2237	255
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	1052	54	180	1756	25	95	1746	67	134	2355	268
RTOR Reduction (vph)	0	0	19	0	1	0	0	5	0	0	15	0
Lane Group Flow (vph)	74	1052	35	180	1780	0	95	1808	0	134	2608	0
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases	8		8	4			6			2		
Actuated Green, G (s)	34.7	29.2	34.6	37.7	30.7		34.2	28.8		37.4	30.4	
Effective Green, g (s)	35.7	30.2	35.6	38.7	31.7		35.2	29.8		38.4	31.4	
Actuated g/C Ratio	0.40	0.34	0.40	0.43	0.35		0.39	0.33		0.43	0.35	
Clearance Time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	4.8	3.0	3.0	4.6		3.0	4.3		3.0	5.5	
Lane Grp Cap (vph)	161	1000	587	186	1048		159	1410		186	1471	
v/s Ratio Prot	0.03	0.35	0.00	c0.08	c0.60		0.04	0.42		c0.06	c0.62	
v/s Ratio Perm	0.15		0.02	0.34			0.20			0.25		
v/c Ratio	0.46	1.05	0.06	0.97	1.70		0.60	1.28		0.72	1.77	
Uniform Delay, d1	22.3	29.9	16.8	20.9	29.1		22.8	30.1		42.1	29.3	
Progression Factor	0.61	0.73	0.61	1.00	1.00		1.55	0.36		1.76	1.51	
Incremental Delay, d2	1.3	37.5	0.0	56.0	318.3		0.5	127.6		1.3	348.1	
Delay (s)	14.8	59.5	10.4	76.8	347.5		35.8	138.5		75.3	392.3	
Level of Service	B	E	B	E	F		D	F		E	F	
Approach Delay (s)		54.4			322.6			133.4			376.9	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	255.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	137.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘	↑↑↑		↘	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2980	1333	1490	2972		1490	4255		1490	4280	
Flt Permitted	0.11	1.00	1.00	0.10	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	179	2980	1333	161	2972		161	4255		161	4280	
Volume (vph)	27	1061	154	153	1505	27	85	1944	85	75	2254	7
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	28	1083	157	156	1536	28	87	1984	87	77	2300	7
RTOR Reduction (vph)	0	0	9	0	1	0	0	5	0	0	1	0
Lane Group Flow (vph)	28	1083	148	156	1563	0	87	2066	0	77	2306	0
Turn Type	Perm		Perm	pm+pt		Perm		Perm		Perm		
Protected Phases		8		7	4		6		6		2	
Permitted Phases	8		8	4		6		2				
Actuated Green, G (s)	34.0	34.0	34.0	42.0	42.0	38.0	38.0	38.0	38.0	38.0	38.0	
Effective Green, g (s)	35.0	35.0	35.0	43.0	43.0	39.0	39.0	39.0	39.0	39.0	39.0	
Actuated g/C Ratio	0.39	0.39	0.39	0.48	0.48	0.43	0.43	0.43	0.43	0.43	0.43	
Clearance Time (s)	5.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	70	1159	518	136	1420	70	1844		70	1855		
v/s Ratio Prot		0.36		0.05	c0.53		0.49			0.54		
v/s Ratio Perm	0.16		0.11	c0.50		c0.54		0.48				
v/c Ratio	0.40	0.93	0.29	1.15	1.10	1.24	1.12	1.10	1.24			
Uniform Delay, d1	19.9	26.4	18.9	21.6	23.5	25.5	25.5	25.5	25.5	25.5	25.5	
Progression Factor	0.83	0.89	0.77	1.00	1.00	1.00	1.00	2.04	1.91			
Incremental Delay, d2	11.0	10.8	0.9	122.1	56.4	186.4	62.1	63.1	110.0			
Delay (s)	27.7	34.3	15.5	143.7	79.9	211.9	87.6	115.3	158.6			
Level of Service	C	C	B	F	E	F	F	F	F			
Approach Delay (s)		31.8			85.7		92.6		157.2			
Approach LOS		C			F		F		F			

Intersection Summary

HCM Average Control Delay	101.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	132.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↗	↕↕↕		↗	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.91		1.00	0.91	
Frt		0.99			0.99		1.00	1.00		1.00	0.99	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2943			2941		1490	4275		1490	4240	
Flt Permitted		1.00			1.00		0.19	1.00		0.19	1.00	
Satd. Flow (perm)		2943			2941		302	4275		302	4240	
Volume (vph)	0	729	66	0	1225	117	59	1966	23	194	2157	150
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	736	67	0	1237	118	60	1986	23	196	2179	152
RTOR Reduction (vph)	0	0	0	0	0	0	0	2	0	0	12	0
Lane Group Flow (vph)	0	803	0	0	1355	0	60	2007	0	196	2319	0
Turn Type		Perm		Perm		Perm		Perm		Perm		
Protected Phases		8		4		4		6		6		2
Permitted Phases		8		4		6		6		2		2
Actuated Green, G (s)		30.3		30.3		20.1		20.1		20.1		20.1
Effective Green, g (s)		31.2		31.2		20.8		20.8		20.8		20.8
Actuated g/C Ratio		0.52		0.52		0.35		0.35		0.35		0.35
Clearance Time (s)		4.9		4.9		4.7		4.7		4.7		4.7
Vehicle Extension (s)		3.0		3.0		3.0		3.0		3.0		3.0
Lane Grp Cap (vph)		1530		1529		105		1482		105		1470
v/s Ratio Prot		0.27		c0.46		0.47		0.47		0.55		0.55
v/s Ratio Perm						0.20				c0.65		
v/c Ratio		0.52		0.89		0.57		1.35		1.87		1.58
Uniform Delay, d1		9.5		12.8		16.0		19.6		19.6		19.6
Progression Factor		1.00		1.00		1.00		1.00		1.00		1.00
Incremental Delay, d2		0.3		6.6		20.6		163.9		424.0		263.1
Delay (s)		9.8		19.4		36.6		183.5		443.6		282.7
Level of Service		A		B		D		F		F		F
Approach Delay (s)		9.8		19.4		179.3				295.2		
Approach LOS		A		B		F				F		F

Intersection Summary

HCM Average Control Delay	170.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕↕↕		↔	↕↕↕		↔	↕↕↕		↔	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	4122		1489	4245		1490	4226		1490	4155	
Flt Permitted	0.14	1.00		0.13	1.00		0.13	1.00		0.95	1.00	
Satd. Flow (perm)	216	4122		205	4245		202	4226		1490	4155	
Volume (vph)	96	1200	174	145	1868	62	147	1811	112	204	1724	223
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	97	1212	176	146	1887	63	148	1829	113	206	1741	225
RTOR Reduction (vph)	0	21	0	0	4	0	0	8	0	0	18	0
Lane Group Flow (vph)	97	1367	0	146	1946	0	148	1934	0	206	1948	0
Conf. Peds. (#/hr)	96		120	120		96	89		58	58		89
Conf. Bikes (#/hr)			8			5			3			4
Turn Type	pm+pt			pm+pt			pm+pt			Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8					
Actuated Green, G (s)	34.9	29.0		38.1	30.6		38.5	31.0		7.5	31.0	
Effective Green, g (s)	34.4	29.0		37.6	30.6		38.0	31.0		7.0	31.0	
Actuated g/C Ratio	0.38	0.32		0.42	0.34		0.42	0.34		0.08	0.34	
Clearance Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	159	1328		186	1443		185	1456		116	1431	
v/s Ratio Prot	0.04	0.33		c0.06	c0.46		0.06	0.46		c0.14	c0.47	
v/s Ratio Perm	0.20			0.27			0.27					
v/c Ratio	0.61	1.03		0.78	1.35		0.80	1.33		1.78	1.36	
Uniform Delay, d1	23.0	30.5		20.2	29.7		42.5	29.5		41.5	29.5	
Progression Factor	1.42	0.69		1.38	0.82		1.79	0.87		1.00	1.00	
Incremental Delay, d2	6.4	31.8		14.2	160.2		12.9	150.5		381.6	167.1	
Delay (s)	39.1	53.0		42.1	184.5		89.0	176.3		423.1	196.6	
Level of Service	D	D		D	F		F	F		F	F	
Approach Delay (s)		52.1			174.5			170.1			218.1	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	162.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	122.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕↕		↕	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.94			0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1454			1512		1490	4271		1490	4269	
Flt Permitted		0.93			0.90		0.07	1.00		0.07	1.00	
Satd. Flow (perm)		1360			1370		117	4271		117	4269	
Volume (vph)	22	59	57	80	198	47	76	1989	27	9	2024	36
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	61	59	82	204	48	78	2051	28	9	2087	37
RTOR Reduction (vph)	0	1	0	0	1	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	142	0	0	333	0	78	2078	0	9	2122	0
Conf. Peds. (#/hr)	6		10	10		6	21		10	10		5
Conf. Bikes (#/hr)			2			2			2			
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		27.3			27.3		53.2	53.2		53.2	53.2	
Effective Green, g (s)		28.3			28.3		53.7	53.7		53.7	53.7	
Actuated g/C Ratio		0.31			0.31		0.60	0.60		0.60	0.60	
Clearance Time (s)		5.0			5.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		428			431		70	2548		70	2547	
v/s Ratio Prot								0.49			0.50	
v/s Ratio Perm		0.10			c0.24		c0.67			0.08		
v/c Ratio		0.33			0.77		1.11	0.82		0.13	0.83	
Uniform Delay, d1		23.6			27.9		18.1	14.3		7.9	14.6	
Progression Factor		1.00			1.00		1.00	1.00		0.47	0.78	
Incremental Delay, d2		0.5			8.3		142.1	3.0		0.3	0.3	
Delay (s)		24.1			36.3		160.3	17.3		4.0	11.7	
Level of Service		C			D		F	B		A	B	
Approach Delay (s)		24.1			36.3			22.4			11.7	
Approach LOS		C			D			C			B	
Intersection Summary												
HCM Average Control Delay			18.6				HCM Level of Service			B		
HCM Volume to Capacity ratio			1.00									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			93.5%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑↑		↖	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	4256		1490	4250		1490	4269		1490	4227	
Flt Permitted	0.12	1.00		0.11	1.00		0.95	1.00		0.12	1.00	
Satd. Flow (perm)	189	4256		169	4250		1490	4269		191	4227	
Volume (vph)	108	1381	59	95	1737	93	100	1918	41	142	1996	188
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	115	1469	63	101	1848	99	106	2040	44	151	2123	200
RTOR Reduction (vph)	0	4	0	0	5	0	0	2	0	0	11	0
Lane Group Flow (vph)	115	1528	0	101	1942	0	106	2082	0	151	2312	0
Turn Type	Perm		pm+pt			Prot		pm+pt				
Protected Phases	8		7		4		5		1			6
Permitted Phases	8		4					2		6		
Actuated Green, G (s)	31.8	31.8	43.7		43.7		10.1	29.5	43.4		31.4	
Effective Green, g (s)	33.2	33.2	45.1		45.1		10.1	30.9	44.8		32.8	
Actuated g/C Ratio	0.33	0.33	0.45		0.45		0.10	0.31	0.45		0.33	
Clearance Time (s)	5.4	5.4	4.0		5.4		4.0	5.4	4.0		5.4	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	4.0		3.0	
Lane Grp Cap (vph)	63	1413	181		1917		150	1319	241		1386	
v/s Ratio Prot	c0.61		0.04		c0.46		0.07		c0.08		c0.55	
v/s Ratio Perm	c0.61		0.21				0.49		0.20			
v/c Ratio	1.83	1.08	0.56		1.01		0.71	1.58	0.63		1.67	
Uniform Delay, d1	33.4	33.4	21.3		27.4		43.5	34.5	43.1		33.6	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	426.5	49.2	3.7		23.8		14.1	264.0	5.7		303.9	
Delay (s)	459.9	82.6	25.0		51.2		57.6	298.5	48.8		337.5	
Level of Service	F		C			D		E		F		D
Approach Delay (s)	109.0					49.9		286.8		319.9		
Approach LOS	F					D		F		F		

Intersection Summary

HCM Average Control Delay	203.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	121.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑			↑↑↑			↑	↗		↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91			0.91			1.00	1.00		1.00	
Frbp, ped/bikes	1.00	1.00			0.99			1.00	0.97		0.99	
Flpb, ped/bikes	1.00	1.00			1.00			1.00	1.00		0.99	
Frt	1.00	1.00			1.00			1.00	0.85		0.95	
Flt Protected	0.95	1.00			1.00			0.99	1.00		0.98	
Satd. Flow (prot)	1490	4243			4206			1556	1287		1423	
Flt Permitted	0.06	1.00			1.00			0.96	1.00		0.83	
Satd. Flow (perm)	100	4243			4206			1499	1287		1201	
Volume (vph)	86	1158	37	0	2080	71	11	75	36	84	37	74
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	89	1194	38	0	2144	73	11	77	37	87	38	76
RTOR Reduction (vph)	0	3	0	0	3	0	0	0	29	0	2	0
Lane Group Flow (vph)	89	1229	0	0	2214	0	0	88	8	0	199	0
Conf. Peds. (#/hr)	151		56	56		151	25		19	19		25
Conf. Bikes (#/hr)			4			7			1			1
Turn Type	Perm			Perm			Perm		Perm		Perm	
Protected Phases	6			2			8		8		4	
Permitted Phases	6						8		8		4	
Actuated Green, G (s)	63.1	63.1			63.1			19.4	19.4		19.4	
Effective Green, g (s)	62.6	62.6			62.6			19.4	19.4		19.4	
Actuated g/C Ratio	0.70	0.70			0.70			0.22	0.22		0.22	
Clearance Time (s)	3.5	3.5			3.5			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	70	2951			2926			323	277		259	
v/s Ratio Prot		0.29			0.53							
v/s Ratio Perm	c0.89							0.06	0.01		c0.17	
v/c Ratio	1.27	0.42			0.76			0.27	0.03		0.77	
Uniform Delay, d1	13.7	5.9			8.8			29.4	27.9		33.2	
Progression Factor	1.47	1.18			0.92			1.00	1.00		1.00	
Incremental Delay, d2	181.2	0.3			0.2			0.5	0.0		12.7	
Delay (s)	201.4	7.3			8.3			29.9	27.9		45.9	
Level of Service	F	A			A			C	C		D	
Approach Delay (s)		20.3			8.3			29.3			45.9	
Approach LOS		C			A			C			D	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑	↖		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.86	0.86		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.94			0.94	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.99	
Satd. Flow (prot)	1583	4543		1583	4300	1218		1563			1560	
Flt Permitted	0.08	1.00		0.14	1.00	1.00		0.91			0.72	
Satd. Flow (perm)	133	4543		225	4300	1218		1420			1127	
Volume (vph)	45	1215	12	63	1811	129	26	178	158	116	251	253
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	52	1397	14	72	2082	148	30	205	182	133	289	291
RTOR Reduction (vph)	0	1	0	0	0	66	0	24	0	0	4	0
Lane Group Flow (vph)	52	1410	0	72	2082	82	0	393	0	0	709	0
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases	6			2		2	8			4		
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	50.0	50.0		50.0	50.0	50.0		32.0			32.0	
Effective Green, g (s)	50.0	50.0		50.0	50.0	50.0		32.0			32.0	
Actuated g/C Ratio	0.56	0.56		0.56	0.56	0.56		0.36			0.36	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	74	2524		125	2389	677		505			401	
v/s Ratio Prot	0.31			c0.48								
v/s Ratio Perm	0.39			0.32	0.07			0.28			c0.63	
v/c Ratio	0.70	0.56		0.58	0.87	0.12		0.78			1.77	
Uniform Delay, d1	14.6	12.9		13.1	17.2	9.5		25.8			29.0	
Progression Factor	1.83	1.98		0.90	1.00	1.15		1.00			1.00	
Incremental Delay, d2	41.2	0.8		12.2	3.2	0.2		7.4			355.8	
Delay (s)	67.9	26.3		23.9	20.4	11.2		33.3			384.8	
Level of Service	E	C		C	C	B		C			F	
Approach Delay (s)	27.8			20.0				33.3			384.8	
Approach LOS	C			B				C			F	

Intersection Summary

HCM Average Control Delay	76.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	123.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	1.00		1.00	1.00	0.90	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	4540		1583	4550	1481	
Flt Permitted	1.00		0.18	1.00	0.99	
Satd. Flow (perm)	4540		294	4550	1481	
Volume (vph)	1189	18	106	2190	10	29
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1252	19	112	2305	11	31
RTOR Reduction (vph)	2	0	0	0	22	0
Lane Group Flow (vph)	1269	0	112	2305	20	0
Turn Type			Perm			
Protected Phases	6			2	8	
Permitted Phases			2			
Actuated Green, G (s)	54.8		54.8	54.8	26.0	
Effective Green, g (s)	55.3		55.3	55.3	26.7	
Actuated g/C Ratio	0.61		0.61	0.61	0.30	
Clearance Time (s)	4.5		4.5	4.5	4.7	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2790		181	2796	439	
v/s Ratio Prot	0.28			c0.51	c0.01	
v/s Ratio Perm			0.38			
v/c Ratio	0.46		0.62	0.82	0.05	
Uniform Delay, d1	9.3		10.8	13.6	22.6	
Progression Factor	1.00		1.21	1.32	1.00	
Incremental Delay, d2	0.5		4.4	0.8	0.0	
Delay (s)	9.8		17.4	18.7	22.6	
Level of Service	A		B	B	C	
Approach Delay (s)	9.8			18.7	22.6	
Approach LOS	A			B	C	

Intersection Summary

HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	3167	1417	1583	3167	1417	1583	3167	1417	1583	3129	3129
Flt Permitted	0.12	1.00	1.00	0.12	1.00	1.00	0.14	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	208	3167	1417	194	3167	1417	238	3167	1417	208	3129	3129
Volume (vph)	76	927	102	227	1538	147	92	952	124	126	1387	120
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	78	946	104	232	1569	150	94	971	127	129	1415	122
RTOR Reduction (vph)	0	0	22	0	0	7	0	0	87	0	7	0
Lane Group Flow (vph)	78	946	82	232	1569	143	94	971	40	129	1530	0
Turn Type	Perm		Perm	pm+pt		pm+ov	Perm		Perm	pm+pt		
Protected Phases		6		5		2	7		8		7	4
Permitted Phases	6		6	2		2	8		8		4	
Actuated Green, G (s)	31.0	31.0	31.0	43.0	43.0	48.7	28.1	28.1	28.1	37.0	37.0	37.0
Effective Green, g (s)	32.0	32.0	32.0	44.0	44.0	50.0	28.0	28.0	28.0	38.0	38.0	38.0
Actuated g/C Ratio	0.36	0.36	0.36	0.49	0.49	0.56	0.31	0.31	0.31	0.42	0.42	0.42
Clearance Time (s)	5.0	5.0	5.0	3.2	5.0	4.3	3.9	3.9	3.9	4.3	5.0	5.0
Vehicle Extension (s)	4.7	4.7	4.7	3.0	4.2	3.0	4.3	4.3	4.3	3.0	4.5	4.5
Lane Grp Cap (vph)	74	1126	504	218	1548	850	74	985	441	179	1321	1321
v/s Ratio Prot		0.30		0.09	c0.50	0.01		0.31		0.05	c0.49	
v/s Ratio Perm	0.37		0.06	c0.43		0.09	c0.39		0.03	0.26		
v/c Ratio	1.05	0.84	0.16	1.06	1.01	0.17	1.27	0.99	0.09	0.72	1.16	1.16
Uniform Delay, d1	29.0	26.6	19.8	20.8	23.0	9.8	31.0	30.8	22.0	20.3	26.0	26.0
Progression Factor	1.00	1.00	1.00	2.11	0.30	0.35	0.50	0.49	0.14	0.75	0.43	0.43
Incremental Delay, d2	120.3	7.6	0.7	38.2	10.6	0.0	131.2	5.9	0.0	3.3	73.4	73.4
Delay (s)	149.3	34.2	20.5	82.0	17.6	3.4	146.5	20.9	3.1	18.5	84.6	84.6
Level of Service	F	C	C	F	B	A	F	C	A	B	F	F
Approach Delay (s)		40.9			24.2			28.9			79.5	
Approach LOS		D			C			C			E	

Intersection Summary

HCM Average Control Delay	43.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	124.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3137		1583	3167	1417	1583	3118		1583	3147	
Flt Permitted	0.11	1.00		0.23	1.00	1.00	0.14	1.00		0.12	1.00	
Satd. Flow (perm)	190	3137		390	3167	1417	230	3118		202	3147	
Volume (vph)	104	653	44	148	1611	179	78	1041	118	197	1428	62
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	116	726	49	164	1790	199	87	1157	131	219	1587	69
RTOR Reduction (vph)	0	6	0	0	0	28	0	9	0	0	3	0
Lane Group Flow (vph)	116	770	0	164	1790	171	87	1279	0	219	1653	0
Turn Type	pm+pt			pm+pt		pm+ov	Perm			pm+pt		
Protected Phases	1	6		5	2	7		8		7	4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	38.9	33.1		38.9	33.1	38.9	27.1	27.1		36.1	36.1	
Effective Green, g (s)	40.0	35.0		40.0	35.0	40.0	29.0	29.0		38.0	38.0	
Actuated g/C Ratio	0.44	0.39		0.44	0.39	0.44	0.32	0.32		0.42	0.42	
Clearance Time (s)	3.2	5.9		3.2	5.9	3.2	5.9	5.9		3.2	5.9	
Vehicle Extension (s)	3.0	4.6		3.0	4.7	3.0	4.7	4.7		3.0	4.7	
Lane Grp Cap (vph)	162	1220		240	1232	693	74	1005		162	1329	
v/s Ratio Prot	c0.04	0.25		0.04	c0.57	0.01		0.41		0.08	c0.53	
v/s Ratio Perm	0.28			0.27		0.11	0.38			c0.50		
v/c Ratio	0.72	0.63		0.68	1.45	0.25	1.18	1.27		1.35	1.24	
Uniform Delay, d1	43.3	22.3		17.9	27.5	15.6	30.5	30.5		44.7	26.0	
Progression Factor	1.00	1.00		0.62	0.82	0.73	1.47	1.47		0.93	0.55	
Incremental Delay, d2	14.0	2.5		4.1	206.2	0.1	156.8	129.9		162.1	110.2	
Delay (s)	57.3	24.8		15.2	228.6	11.5	201.6	174.8		203.8	124.4	
Level of Service	E	C		B	F	B	F	F		F	F	
Approach Delay (s)		29.0			192.3			176.5			133.6	
Approach LOS		C			F			F			F	

Intersection Summary

HCM Average Control Delay	148.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	124.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖↗	↖	↗	↖	↖↗	↗	↖	↖↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.94	1.00	1.00	0.91	1.00	0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.98	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1550	1641		3072	1667	1337	1583	3167	1287	1555	3096	
Flt Permitted	0.42	1.00		0.95	1.00	1.00	0.09	1.00	1.00	0.24	1.00	
Satd. Flow (perm)	691	1641		3072	1667	1337	142	3167	1287	398	3096	
Volume (vph)	24	271	27	350	471	105	10	856	92	51	1373	111
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	25	282	28	365	491	109	10	892	96	53	1430	116
RTOR Reduction (vph)	0	4	0	0	0	57	0	0	0	0	7	0
Lane Group Flow (vph)	25	306	0	365	491	52	10	892	96	53	1539	0
Conf. Peds. (#/hr)	28		6	6		28	43		36	36		43
Conf. Bikes (#/hr)			4			1			5			7
Turn Type	Perm			Prot		Perm	Perm	pm+ov		Perm		
Protected Phases		8		7	4			6	7		2	
Permitted Phases	8					4	6		6		2	
Actuated Green, G (s)	20.2	20.2		10.0	34.2	34.2	46.2	46.2	56.2	46.2	46.2	
Effective Green, g (s)	21.0	21.0		10.0	35.0	35.0	47.0	47.0	57.0	47.0	47.0	
Actuated g/C Ratio	0.23	0.23		0.11	0.39	0.39	0.52	0.52	0.63	0.52	0.52	
Clearance Time (s)	4.8	4.8		4.0	4.8	4.8	4.8	4.8	4.0	4.8	4.8	
Vehicle Extension (s)	5.9	5.9		3.0	5.2	5.2	4.8	4.8	3.0	4.4	4.4	
Lane Grp Cap (vph)	161	383		341	648	520	74	1654	872	208	1617	
v/s Ratio Prot		0.19		c0.12	c0.29			0.28	0.01		c0.50	
v/s Ratio Perm	0.04					0.04	0.07		0.06	0.13		
v/c Ratio	0.16	0.80		1.07	0.76	0.10	0.14	0.54	0.11	0.25	0.95	
Uniform Delay, d1	27.4	32.5		40.0	23.8	17.5	11.1	14.3	6.5	11.8	20.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.28	0.24	0.21	0.22	0.43	
Incremental Delay, d2	2.0	15.9		68.7	8.1	0.4	0.3	0.1	0.0	0.3	1.8	
Delay (s)	29.5	48.4		108.7	31.9	17.9	3.4	3.6	1.4	2.9	10.6	
Level of Service	C	D		F	C	B	A	A	A	A	B	
Approach Delay (s)		47.0			59.4			3.4			10.3	
Approach LOS		D			E			A			B	

Intersection Summary

HCM Average Control Delay	23.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕↕↕		↘	↕↕↕		↘	↕↕		↘	↕↕	↘
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.98		1.00	1.00	0.83
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4471		1579	4500		1583	3069		1583	3167	1179
Flt Permitted	0.14	1.00		0.14	1.00		0.13	1.00		0.95	1.00	1.00
Satd. Flow (perm)	238	4471		237	4500		222	3069		1583	3167	1179
Volume (vph)	135	996	54	111	1899	46	220	1155	76	157	1627	272
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	144	1060	57	118	2020	49	234	1229	81	167	1731	289
RTOR Reduction (vph)	0	6	0	0	3	0	0	5	0	0	0	121
Lane Group Flow (vph)	144	1111	0	118	2066	0	234	1305	0	167	1731	168
Conf. Peds. (#/hr)	227		147	147		227	145		184	184		145
Conf. Bikes (#/hr)			2			6			8			6
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8					4
Actuated Green, G (s)	33.8	27.0		33.8	27.0		35.8	29.0		10.8	33.0	33.0
Effective Green, g (s)	34.0	28.0		34.0	28.0		36.0	30.0		10.0	34.0	34.0
Actuated g/C Ratio	0.38	0.31		0.38	0.31		0.40	0.33		0.11	0.38	0.38
Clearance Time (s)	3.2	5.0		3.2	5.0		3.2	5.0		3.2	5.0	5.0
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	180	1391		179	1400		180	1023		176	1196	445
v/s Ratio Prot	c0.05	0.25		0.04	c0.46		c0.09	0.43		0.11	c0.55	
v/s Ratio Perm	0.25			0.20			0.43					0.14
v/c Ratio	0.80	0.80		0.66	1.48		1.30	1.28		0.95	1.45	0.38
Uniform Delay, d1	43.1	28.4		20.3	31.0		44.2	30.0		39.7	28.0	20.3
Progression Factor	1.17	1.15		1.00	1.00		1.53	0.87		0.81	1.30	2.01
Incremental Delay, d2	16.8	3.6		8.5	218.1		162.8	129.9		36.7	204.0	1.4
Delay (s)	67.2	36.4		28.8	249.1		230.4	156.1		69.1	240.5	42.3
Level of Service	E	D		C	F		F	F		E	F	D
Approach Delay (s)		40.0			237.2			167.3			201.2	
Approach LOS		D			F			F			F	

Intersection Summary			
HCM Average Control Delay	176.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	127.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗	↖	↔	↗		↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)			4.0	4.0	4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor			1.00	0.95	0.91	0.95		0.95		1.00	0.95	
Frbp, ped/bikes			0.98	1.00	0.99	0.97		0.99		1.00	1.00	
Flpb, ped/bikes			1.00	1.00	1.00	1.00		1.00		1.00	1.00	
Frt			0.86	1.00	0.93	0.85		0.98		1.00	1.00	
Flt Protected			1.00	0.95	0.97	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1412	1502	1358	1303		3074		1583	3167	
Flt Permitted			1.00	0.95	0.97	1.00		1.00		0.12	1.00	
Satd. Flow (perm)			1412	1502	1358	1303		3074		195	3167	
Volume (vph)	0	0	17	195	0	216	0	1173	176	117	1268	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	18	205	0	227	0	1235	185	123	1335	0
RTOR Reduction (vph)	0	0	17	0	32	127	0	11	0	0	0	0
Lane Group Flow (vph)	0	0	1	123	114	36	0	1409	0	123	1335	0
Conf. Peds. (#/hr)	11		1	1		11	8		23	23		8
Conf. Bikes (#/hr)						5			5			1
Turn Type			custom	Perm		Perm				Perm		
Protected Phases					3			2			2	
Permitted Phases			4	3		3				2		
Actuated Green, G (s)			2.2	18.9	18.9	18.9		54.5		54.5	54.5	
Effective Green, g (s)			3.1	19.8	19.8	19.8		55.1		55.1	55.1	
Actuated g/C Ratio			0.03	0.22	0.22	0.22		0.61		0.61	0.61	
Clearance Time (s)			4.9	4.9	4.9	4.9		4.6		4.6	4.6	
Vehicle Extension (s)			3.0	3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)			49	330	299	287		1882		119	1939	
v/s Ratio Prot								0.46			0.42	
v/s Ratio Perm			c0.00	0.08	0.08	0.03				c0.63		
v/c Ratio			0.01	0.37	0.38	0.12		0.75		1.03	0.69	
Uniform Delay, d1			42.0	29.8	29.9	28.2		12.5		17.4	11.7	
Progression Factor			1.00	1.00	1.00	1.00		1.00		1.47	0.92	
Incremental Delay, d2			0.1	0.7	0.8	0.2		2.8		33.8	0.2	
Delay (s)			42.1	30.5	30.7	28.3		15.3		59.6	10.9	
Level of Service			D	C	C	C		B		E	B	
Approach Delay (s)		42.1			29.8			15.3			15.0	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM Average Control Delay			17.2									HCM Level of Service B
HCM Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			90.0									Sum of lost time (s) 12.0
Intersection Capacity Utilization			76.6%									ICU Level of Service D
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑		↔	↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	
Lane Util. Factor		0.91			0.91		1.00	0.86			0.86	
Frt		0.99			0.96		1.00	1.00			1.00	
Flt Protected		1.00			1.00		0.95	1.00			1.00	
Satd. Flow (prot)		4493			4368		1583	5733			5733	
Flt Permitted		1.00			1.00		0.17	1.00			1.00	
Satd. Flow (perm)		4493			4368		284	5733			5733	
Volume (vph)	0	1426	131	0	1813	661	178	1461	0	0	1401	0
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	1440	132	0	1831	668	180	1476	0	0	1415	0
RTOR Reduction (vph)	0	11	0	0	65	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1561	0	0	2434	0	180	1476	0	0	1415	0
Turn Type							Perm					
Protected Phases		6			6			2			2	
Permitted Phases							2					
Actuated Green, G (s)		22.1			22.1		24.5	24.5			24.5	
Effective Green, g (s)		23.0			23.0		23.5	23.5			23.5	
Actuated g/C Ratio		0.23			0.23		0.24	0.24			0.24	
Clearance Time (s)		4.9			4.9		3.0	3.0			3.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		1033			1005		67	1347			1347	
v/s Ratio Prot		0.35			c0.56			0.26			0.25	
v/s Ratio Perm							c0.63					
v/c Ratio		1.51			2.42		2.69	1.10			1.05	
Uniform Delay, d1		38.5			38.5		38.2	38.2			38.2	
Progression Factor		0.69			1.00		1.00	1.00			0.59	
Incremental Delay, d2		230.6			642.7		799.6	55.1			25.0	
Delay (s)		257.2			681.2		837.8	93.3			47.6	
Level of Service		F			F		F	F			D	
Approach Delay (s)		257.2			681.2			174.2			47.6	
Approach LOS		F			F			F			D	

Intersection Summary

HCM Average Control Delay	344.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.56		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	53.5
Intersection Capacity Utilization	99.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗		↑↑↑	↗		↑↗		↘	↑↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.86	1.00		0.91	1.00		0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85		1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1583	5733	1417		4550	1417		3166		1583	3139	
Flt Permitted	0.17	1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)	284	5733	1417		4550	1417		3166		1583	3139	
Volume (vph)	105	1099	40	0	1811	345	0	912	2	258	1228	76
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	108	1133	41	0	1867	356	0	940	2	266	1266	78
RTOR Reduction (vph)	0	0	31	0	0	206	0	0	0	0	5	0
Lane Group Flow (vph)	108	1133	10	0	1867	150	0	942	0	266	1339	0
Turn Type	Perm		Perm		Perm				Prot			
Protected Phases	2		2		2		8		7		4	
Permitted Phases	2		2		2							
Actuated Green, G (s)	24.5	24.5	24.5		24.5	24.5		31.0		5.0	31.0	
Effective Green, g (s)	23.5	23.5	23.5		23.5	23.5		32.5		5.0	32.5	
Actuated g/C Ratio	0.24	0.24	0.24		0.24	0.24		0.32		0.05	0.32	
Clearance Time (s)	3.0	3.0	3.0		3.0	3.0		5.5		4.0	5.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		5.0		3.0	4.0	
Lane Grp Cap (vph)	67	1347	333		1069	333		1029		79	1020	
v/s Ratio Prot		0.20			c0.41			0.30		c0.17	c0.43	
v/s Ratio Perm	0.38		0.01			0.11						
v/c Ratio	1.61	0.84	0.03		1.75	0.45		0.92		3.37	1.31	
Uniform Delay, d1	38.2	36.5	29.5		38.2	32.7		32.4		47.5	33.8	
Progression Factor	1.00	1.00	1.00		0.97	1.29		0.20		1.00	1.00	
Incremental Delay, d2	333.8	6.5	0.2		336.3	0.4		7.3		1096.7	147.9	
Delay (s)	372.0	43.0	29.6		373.2	42.6		13.8		1144.2	181.7	
Level of Service	F	D	C		F	D		B		F	F	
Approach Delay (s)		70.3			320.3			13.8			340.7	
Approach LOS		E			F			B			F	

Intersection Summary

HCM Average Control Delay	225.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	39.0
Intersection Capacity Utilization	105.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶		↶	↶↶			↶↶	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95			0.95	
Frt	1.00	1.00		1.00	1.00		1.00	1.00			0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1583	4541		1583	4549		1583	3161			3029	
Flt Permitted	0.17	1.00		0.17	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	290	4541		290	4549		1583	3161			3029	
Volume (vph)	30	1531	20	43	1772	2	55	886	11	0	865	354
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	31	1562	20	44	1808	2	56	904	11	0	883	361
RTOR Reduction (vph)	0	2	0	0	0	0	0	1	0	0	44	0
Lane Group Flow (vph)	31	1580	0	44	1810	0	56	914	0	0	1200	0
Turn Type	Perm		Perm		Prot							
Protected Phases	6		6		3		8				4	
Permitted Phases	6		6									
Actuated Green, G (s)	22.1	22.1		22.1	22.1		5.0	31.0			31.0	
Effective Green, g (s)	23.0	23.0		23.0	23.0		5.0	32.5			32.5	
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.05	0.32			0.32	
Clearance Time (s)	4.9	4.9		4.9	4.9		4.0	5.5			5.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	5.0			4.0	
Lane Grp Cap (vph)	67	1044		67	1046		79	1027			984	
v/s Ratio Prot		0.35			c0.40		c0.04	0.29			c0.40	
v/s Ratio Perm	0.11			0.15								
v/c Ratio	0.46	1.51		0.66	1.73		0.71	0.89			1.22	
Uniform Delay, d1	33.2	38.5		34.9	38.5		46.8	32.1			33.8	
Progression Factor	1.00	1.00		0.71	0.69		1.00	1.00			0.29	
Incremental Delay, d2	21.3	236.2		4.5	329.0		25.1	11.5			99.7	
Delay (s)	54.4	274.7		29.1	355.6		71.9	43.6			109.6	
Level of Service	D	F		C	F		E	D			F	
Approach Delay (s)		270.5			347.8			45.2			109.6	
Approach LOS		F			F			D			F	

Intersection Summary

HCM Average Control Delay	222.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	39.5
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↖	↗	↗	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	3121		1583	3148		1583	3167	1417	1583	3167	1417
Flt Permitted	0.13	1.00		0.13	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	222	3121		222	3148		1583	3167	1417	1583	3167	1417
Volume (vph)	70	886	93	121	1523	61	148	930	144	43	847	162
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	72	913	96	125	1570	63	153	959	148	44	873	167
RTOR Reduction (vph)	0	9	0	0	3	0	0	0	78	0	0	27
Lane Group Flow (vph)	72	1000	0	125	1630	0	153	959	70	44	873	140
Turn Type	Perm			Perm			Prot		Perm	Prot		Perm
Protected Phases	6			2			3		8	7		4
Permitted Phases	6			2					8			4
Actuated Green, G (s)	29.0	29.0		29.0	29.0		10.0	41.6	41.6	5.4	37.0	37.0
Effective Green, g (s)	30.0	30.0		30.0	30.0		10.0	42.6	42.6	5.4	38.0	38.0
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.11	0.47	0.47	0.06	0.42	0.42
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	74	1040		74	1049		176	1499	671	95	1337	598
v/s Ratio Prot		0.32			0.52		c0.10	c0.30		0.03	0.28	
v/s Ratio Perm	0.32			c0.56					0.05			0.10
v/c Ratio	0.97	0.96		1.69	1.55		0.87	0.64	0.10	0.46	0.65	0.23
Uniform Delay, d1	29.6	29.4		30.0	30.0		39.4	17.9	13.1	40.9	20.7	16.7
Progression Factor	0.52	0.53		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	25.5	3.3		361.3	253.8		33.6	2.1	0.3	3.5	2.5	0.9
Delay (s)	40.8	18.8		391.3	283.8		73.0	20.0	13.4	44.4	23.2	17.6
Level of Service	D	B		F	F		E	C	B	D	C	B
Approach Delay (s)		20.2			291.5			25.7			23.2	
Approach LOS		C			F			C			C	

Intersection Summary

HCM Average Control Delay	114.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	106.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↑↑			↖↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95			0.95	
Frt	1.00	0.99		1.00	1.00			0.96			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1583	4503		1583	4543			3049			3076	
Flt Permitted	0.09	1.00		0.15	1.00			1.00			0.65	
Satd. Flow (perm)	152	4503		252	4543			3049			2009	
Volume (vph)	62	1096	81	257	2030	22	0	526	174	133	929	197
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	67	1178	87	276	2183	24	0	566	187	143	999	212
RTOR Reduction (vph)	0	9	0	0	1	0	0	25	0	0	1	0
Lane Group Flow (vph)	67	1256	0	276	2206	0	0	728	0	0	1353	0
Turn Type	Perm		Perm				Perm					
Protected Phases	6		2				8				4	
Permitted Phases	6		2								4	
Actuated Green, G (s)	42.3	42.3		42.3	42.3			36.0			36.0	
Effective Green, g (s)	44.0	44.0		44.0	44.0			38.0			38.0	
Actuated g/C Ratio	0.49	0.49		0.49	0.49			0.42			0.42	
Clearance Time (s)	5.7	5.7		5.7	5.7			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	74	2201		123	2221			1287			848	
v/s Ratio Prot		0.28			0.49			0.24				
v/s Ratio Perm	0.44			c1.09							c0.67	
v/c Ratio	0.91	0.57		2.24	0.99			0.57			1.60	
Uniform Delay, d1	21.1	16.3		23.0	22.9			19.7			26.0	
Progression Factor	0.42	0.48		0.62	0.53			1.00			1.00	
Incremental Delay, d2	42.1	0.4		562.1	4.4			0.6			273.5	
Delay (s)	50.9	8.2		576.3	16.5			20.3			299.5	
Level of Service	D	A		F	B			C			F	
Approach Delay (s)		10.4			78.7			20.3			299.5	
Approach LOS		B			E			C			F	

Intersection Summary

HCM Average Control Delay	106.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	128.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑↑		↗	↑↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4487		1583	4477		1583	4479		1583	4550	1417
Flt Permitted	0.13	1.00		0.13	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	215	4487		215	4477		1583	4479		1583	4550	1417
Volume (vph)	53	1171	118	112	1669	200	518	1251	145	272	1119	186
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	57	1259	127	120	1795	215	557	1345	156	292	1203	200
RTOR Reduction (vph)	0	13	0	0	16	0	0	16	0	0	0	3
Lane Group Flow (vph)	57	1373	0	120	1994	0	557	1485	0	292	1203	197
Turn Type	Perm			Perm			Prot			Prot		Perm
Protected Phases	4			8			5			1		6
Permitted Phases	4			8			2					6
Actuated Green, G (s)	29.0	29.0		29.0	29.0		14.0	31.0		15.0	31.0	31.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		15.0	32.0		15.0	32.0	32.0
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.17	0.36		0.17	0.36	0.36
Clearance Time (s)	6.0	6.0		6.0	6.0		5.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	4.0	4.0		4.0	4.0		2.0	4.0		2.0	4.0	4.0
Lane Grp Cap (vph)	74	1546		74	1542		264	1593		264	1618	504
v/s Ratio Prot		0.31			0.45		c0.35			0.18	0.26	
v/s Ratio Perm	0.27			c0.56			c0.33					0.14
v/c Ratio	0.77	0.89		1.62	1.29		2.11	0.93		1.11	0.74	0.39
Uniform Delay, d1	26.3	27.9		29.5	29.5		37.5	28.0		37.5	25.4	21.7
Progression Factor	1.00	1.00		0.44	0.42		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	53.7	8.0		285.3	132.3		512.1	11.3		86.8	3.1	2.3
Delay (s)	80.0	35.8		298.3	144.6		549.6	39.3		124.3	28.5	24.0
Level of Service	F	D		F	F		F	D		F	C	C
Approach Delay (s)		37.6			153.2			177.4			44.5	
Approach LOS		D			F			F			D	

Intersection Summary

HCM Average Control Delay	112.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	118.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	0.96
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	1.00
Satd. Flow (prot)	1583	4530		1564	4521			1592			1657	1364
Flt Permitted	0.06	1.00		0.16	1.00			0.94			0.97	1.00
Satd. Flow (perm)	98	4530		266	4521			1505			1611	1364
Volume (vph)	84	1219	21	26	1991	47	27	165	48	17	200	101
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	1354	23	29	2212	52	30	183	53	19	222	112
RTOR Reduction (vph)	0	2	0	0	3	0	0	9	0	0	0	8
Lane Group Flow (vph)	93	1375	0	29	2261	0	0	257	0	0	241	104
Conf. Peds. (#/hr)	47		44	44		47	18		31	31		18
Conf. Bikes (#/hr)			3			2			4			1
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	69.0	69.0		69.0	69.0			25.0			25.0	25.0
Effective Green, g (s)	68.0	68.0		68.0	68.0			24.0			24.0	24.0
Actuated g/C Ratio	0.68	0.68		0.68	0.68			0.24			0.24	0.24
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0			3.0			3.0	3.0
Lane Grp Cap (vph)	67	3080		181	3074			361			387	327
v/s Ratio Prot		0.30			0.50							
v/s Ratio Perm	c0.95			0.11				c0.17			0.15	0.08
v/c Ratio	1.39	0.45		0.16	0.74			0.71			0.62	0.32
Uniform Delay, d1	16.0	7.4		5.7	10.2			34.8			34.0	31.3
Progression Factor	0.78	0.38		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	205.7	0.2		1.9	1.6			11.3			7.4	2.6
Delay (s)	218.2	3.0		7.6	11.9			46.1			41.3	33.8
Level of Service	F	A		A	B			D			D	C
Approach Delay (s)		16.6			11.8			46.1			38.9	
Approach LOS		B			B			D			D	

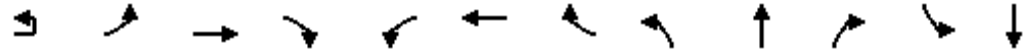
Intersection Summary			
HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘↗	↑↑↗		↘↗	↑↑↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.91		0.97	0.91	
Frbp, ped/bikes	1.00	1.00	0.91	1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3167	1295	1571	3111		3072	4455		3072	4414	
Flt Permitted	0.11	1.00	1.00	0.32	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	186	3167	1295	528	3111		3072	4455		3072	4414	
Volume (vph)	199	476	42	307	1287	95	176	1366	87	35	2100	289
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	216	517	46	334	1399	103	191	1485	95	38	2283	314
RTOR Reduction (vph)	0	0	32	0	4	0	0	5	0	0	15	0
Lane Group Flow (vph)	216	517	14	334	1498	0	191	1575	0	38	2582	0
Confl. Peds. (#/hr)	63		49	49		63	51		51	51		51
Confl. Bikes (#/hr)			3			3			6			3
Turn Type	pm+pt		Perm	pm+pt		Prot		Prot				
Protected Phases	1	6		5	2	3	8		7	4		
Permitted Phases	6		6	2								
Actuated Green, G (s)	49.4	34.5	34.5	49.6	34.6	13.6	48.6		4.5	39.5		
Effective Green, g (s)	49.8	35.9	35.9	50.0	36.0	13.6	49.6		4.5	40.5		
Actuated g/C Ratio	0.41	0.30	0.30	0.42	0.30	0.11	0.41		0.04	0.34		
Clearance Time (s)	3.0	5.4	5.4	3.0	5.4	4.0	5.0		4.0	5.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	239	947	387	342	933	348	1841		115	1490		
v/s Ratio Prot	0.10	0.16		c0.11	c0.48	0.06	c0.35		0.01	c0.58		
v/s Ratio Perm	0.27		0.01	0.29								
v/c Ratio	0.90	0.55	0.04	0.98	1.61	0.55	0.86		0.33	1.73		
Uniform Delay, d1	32.6	35.2	29.8	30.5	42.0	50.3	31.9		56.3	39.8		
Progression Factor	1.56	0.73	0.59	1.00	1.00	0.75	0.61		1.25	0.40		
Incremental Delay, d2	28.7	0.5	0.0	42.0	277.4	1.5	4.6		0.2	330.0		
Delay (s)	79.4	26.1	17.6	72.5	319.4	39.1	24.1		70.4	346.0		
Level of Service	E	C	B	E	F	D	C		E	F		
Approach Delay (s)		40.4			274.5		25.7			342.0		
Approach LOS		D			F		C			F		

Intersection Summary

HCM Average Control Delay	211.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	127.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↑↑		↔	↑↑↑	↔	↔		↔	↔	↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00		0.91		1.00	0.86	0.86	1.00		1.00	0.97	
Frt	1.00		0.99		1.00	1.00	0.85	1.00		0.85	1.00	
Flt Protected	0.95		1.00		0.95	1.00	1.00	0.95		1.00	0.95	
Satd. Flow (prot)	1583		4523		1583	4300	1218	1583		1417	3072	
Flt Permitted	0.95		1.00		0.95	1.00	1.00	0.95		1.00	0.95	
Satd. Flow (perm)	1583		4523		1583	4300	1218	1583		1417	3072	
Volume (vph)	2	0	602	25	6	1546	805	13	0	13	770	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	2	0	647	27	6	1662	866	14	0	14	828	0
RTOR Reduction (vph)	0	0	2	0	0	0	299	0	0	13	0	0
Lane Group Flow (vph)	2	0	672	0	6	1662	567	14	0	1	828	0
Turn Type	Prot				Prot		Perm	Prot			custom	custom
Protected Phases	5		2		1		6			7		
Permitted Phases							6				7	8
Actuated Green, G (s)	2.6		70.3		1.4		68.2			4.4		22.1
Effective Green, g (s)	4.5		71.3		3.3		70.1			5.4		24.0
Actuated g/C Ratio	0.04		0.59		0.03		0.58			0.05		0.20
Clearance Time (s)	5.9		5.0		5.9		5.9			5.0		5.9
Vehicle Extension (s)	3.0		3.0		3.0		3.0			3.0		3.0
Lane Grp Cap (vph)	59		2687		44		2512			71		614
v/s Ratio Prot	0.00		c0.15		0.00		0.39			c0.01		
v/s Ratio Perm							c0.47					0.00 c0.27
v/c Ratio	0.03		0.25		0.14		0.66			0.20		0.01 1.35
Uniform Delay, d1	55.7		11.6		57.0		16.9			19.4		55.2 54.7 48.0
Progression Factor	1.07		1.39		1.11		0.74			4.01		1.00 1.05
Incremental Delay, d2	0.2		0.2		0.5		0.4			3.1		1.4 0.1 162.3
Delay (s)	59.8		16.3		64.0		12.9			80.8		56.6 54.8 212.5
Level of Service	E		B		E		B			F		E D F
Approach Delay (s)			16.4				36.2			55.7		196.9
Approach LOS			B				D			E		F
Intersection Summary												
HCM Average Control Delay			74.4				HCM Level of Service			E		
HCM Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			71.8%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	SBR
Lane Configurations	7
Ideal Flow (vphpl)	1700
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1417
Flt Permitted	1.00
Satd. Flow (perm)	1417
Volume (vph)	266
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	286
RTOR Reduction (vph)	221
Lane Group Flow (vph)	65
Turn Type	custom
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	22.1
Effective Green, g (s)	24.0
Actuated g/C Ratio	0.20
Clearance Time (s)	5.9
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	283
v/s Ratio Prot	
v/s Ratio Perm	0.05
v/c Ratio	0.23
Uniform Delay, d1	40.3
Progression Factor	3.74
Incremental Delay, d2	1.0
Delay (s)	151.6
Level of Service	F
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑	↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor		0.86	1.00		0.86	1.00	1.00	0.91			0.91	
Frt		1.00	0.85		1.00	0.85	1.00	1.00			0.97	
Flt Protected		1.00	1.00		1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)		5733	1417		5733	1417	1583	4548			4406	
Flt Permitted		1.00	1.00		1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)		5733	1417		5733	1417	1583	4548			4406	
Volume (vph)	0	1076	275	0	1536	306	294	1381	4	0	1891	504
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1098	281	0	1567	312	300	1409	4	0	1930	514
RTOR Reduction (vph)	0	0	1	0	0	24	0	0	0	0	3	0
Lane Group Flow (vph)	0	1098	280	0	1567	288	300	1413	0	0	2441	0
Turn Type		pm+ov			Perm		Prot					
Protected Phases		8	1		4		1	6			2	
Permitted Phases		8	8			4						
Actuated Green, G (s)		42.0	52.0		42.0	42.0	10.0	66.0			50.5	
Effective Green, g (s)		44.0	55.5		44.0	44.0	11.5	68.0			52.5	
Actuated g/C Ratio		0.37	0.46		0.37	0.37	0.10	0.57			0.44	
Clearance Time (s)		6.0	5.5		6.0	6.0	5.5	6.0			6.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)		2102	703		2102	520	152	2577			1928	
v/s Ratio Prot		0.19	0.04		c0.27		c0.19	0.31			c0.55	
v/s Ratio Perm			0.16			0.20						
v/c Ratio		0.52	0.40		0.75	0.55	1.97	0.55			1.27	
Uniform Delay, d1		29.8	21.2		33.1	30.2	54.2	16.3			33.8	
Progression Factor		1.32	1.90		1.00	1.00	1.23	0.77			0.32	
Incremental Delay, d2		0.5	0.2		2.5	4.2	457.8	0.7			120.2	
Delay (s)		39.6	40.5		35.6	34.4	524.7	13.3			130.9	
Level of Service		D	D		D	C	F	B			F	
Approach Delay (s)		39.8			35.4			102.9			130.9	
Approach LOS		D			D			F			F	

Intersection Summary			
HCM Average Control Delay	83.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑↑↑		↕	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.95			0.98		1.00	1.00		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1564			1616		1583	4534		1583	4465	
Flt Permitted		0.89			0.90		0.06	1.00		0.11	1.00	
Satd. Flow (perm)		1419			1481		104	4534		178	4465	
Volume (vph)	50	59	60	28	59	12	85	1573	39	70	1735	246
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	62	63	29	62	13	89	1656	41	74	1826	259
RTOR Reduction (vph)	0	17	0	0	5	0	0	2	0	0	15	0
Lane Group Flow (vph)	0	161	0	0	99	0	89	1695	0	74	2070	0
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases	4		8		8		2		6			
Permitted Phases	4		8		2		6					
Actuated Green, G (s)	30.0		30.0		83.4		83.4		83.4		83.4	
Effective Green, g (s)	29.0		29.0		83.0		83.0		83.0		83.0	
Actuated g/C Ratio	0.24		0.24		0.69		0.69		0.69		0.69	
Clearance Time (s)	3.0		3.0		3.6		3.6		3.6		3.6	
Vehicle Extension (s)	3.0		3.0		5.0		5.0		5.0		5.0	
Lane Grp Cap (vph)	343		358		72		3136		123		3088	
v/s Ratio Prot					0.37						0.46	
v/s Ratio Perm	c0.11		0.07		c0.86				0.42			
v/c Ratio	0.47		0.28		1.24		0.54		0.60		0.67	
Uniform Delay, d1	38.9		37.0		18.5		9.1		9.8		10.6	
Progression Factor	1.00		1.00		1.00		1.00		0.85		0.36	
Incremental Delay, d2	4.6		1.9		182.5		0.7		2.0		0.1	
Delay (s)	43.5		38.9		201.0		9.8		10.3		3.9	
Level of Service	D		D		F		A		B		A	
Approach Delay (s)	43.5		38.9		19.3						4.1	
Approach LOS	D		D		B						A	

Intersection Summary

HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑↑		↗	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.96		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4280		1583	4506		1583	4429		1583	4416	
Flt Permitted	0.11	1.00		0.11	1.00		0.11	1.00		0.12	1.00	
Satd. Flow (perm)	191	4280		192	4506		183	4429		193	4416	
Volume (vph)	129	1112	205	120	2099	54	511	1622	213	86	1621	185
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	1171	216	126	2209	57	538	1707	224	91	1706	195
RTOR Reduction (vph)	0	27	0	0	3	0	0	16	0	0	14	0
Lane Group Flow (vph)	136	1360	0	126	2263	0	538	1915	0	91	1887	0
Conf. Peds. (#/hr)	156		159	159		156	90		48	48		90
Conf. Bikes (#/hr)			4			7			3			1
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	44.0	35.4		43.8	35.3		44.5	36.5		40.7	34.6	
Effective Green, g (s)	42.5	34.9		42.3	34.8		43.5	36.5		39.7	34.6	
Actuated g/C Ratio	0.42	0.35		0.42	0.35		0.44	0.36		0.40	0.35	
Clearance Time (s)	3.0	3.5		3.0	3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	187	1494		186	1568		178	1617		148	1528	
v/s Ratio Prot	c0.06	0.32		0.05	c0.50		c0.21	0.43		0.03	0.43	
v/s Ratio Perm	0.25			0.24			c1.11			0.21		
v/c Ratio	0.73	0.91		0.68	1.44		3.02	1.18		0.61	1.24	
Uniform Delay, d1	24.2	31.1		21.2	32.6		48.7	31.8		25.3	32.7	
Progression Factor	1.02	1.17		1.64	1.27		1.84	0.91		1.00	1.00	
Incremental Delay, d2	10.4	9.2		5.3	202.1		916.7	86.0		5.2	111.7	
Delay (s)	35.1	45.6		40.0	243.5		1006.4	114.7		30.5	144.4	
Level of Service	D	D		D	F		F	F		C	F	
Approach Delay (s)		44.7			232.8			309.0			139.2	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	198.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	140.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕↕		↕	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes		0.96			0.99		1.00	0.99		1.00	0.97	
Flpb, ped/bikes		1.00			0.99		0.99	1.00		1.00	1.00	
Frt		0.95			0.99		1.00	0.99		1.00	0.98	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1504			1586		1571	4458		1583	4341	
Flt Permitted		0.80			0.58		0.06	1.00		0.06	1.00	
Satd. Flow (perm)		1219			937		105	4458		104	4341	
Volume (vph)	58	150	128	181	297	51	125	2188	194	20	1685	219
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	61	158	135	191	313	54	132	2303	204	21	1774	231
RTOR Reduction (vph)	0	12	0	0	4	0	0	10	0	0	17	0
Lane Group Flow (vph)	0	342	0	0	554	0	132	2497	0	21	1988	0
Conf. Peds. (#/hr)	39		76	76		39	104		34	34		104
Conf. Bikes (#/hr)			2			2			6			4
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.0			29.0		64.2	64.2		64.2	64.2	
Effective Green, g (s)		28.0			28.0		64.0	64.0		64.0	64.0	
Actuated g/C Ratio		0.28			0.28		0.64	0.64		0.64	0.64	
Clearance Time (s)		3.0			3.0		3.8	3.8		3.8	3.8	
Vehicle Extension (s)		3.0			3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		341			262		67	2853		67	2778	
v/s Ratio Prot								0.56			0.46	
v/s Ratio Perm		0.28			c0.59		c1.26			0.20		
v/c Ratio		1.00			2.12		1.97	0.88		0.31	0.72	
Uniform Delay, d1		36.0			36.0		18.0	14.7		8.1	12.0	
Progression Factor		1.00			1.00		1.00	1.00		1.51	1.49	
Incremental Delay, d2		49.8			514.9		485.6	4.1		1.1	0.1	
Delay (s)		85.8			550.9		503.6	18.8		13.3	18.0	
Level of Service		F			F		F	B		B	B	
Approach Delay (s)		85.8			550.9			43.1			17.9	
Approach LOS		F			F			D			B	

Intersection Summary			
HCM Average Control Delay	87.5	HCM Level of Service	F
HCM Volume to Capacity ratio	2.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	125.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶		↶	↶↶↶		↶	↶↶↶	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	1.00		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4483		1583	4536		1583	4532		1583	4478	
Flt Permitted	0.15	1.00		0.13	1.00		0.12	1.00		0.12	1.00	
Satd. Flow (perm)	256	4483		222	4536		196	4532		196	4478	
Volume (vph)	240	1506	165	191	2467	53	179	2132	57	113	1667	198
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	247	1553	170	197	2543	55	185	2198	59	116	1719	204
RTOR Reduction (vph)	0	15	0	0	2	0	0	3	0	0	16	0
Lane Group Flow (vph)	247	1708	0	197	2596	0	185	2254	0	116	1907	0
Turn Type	Perm			pm+pt			pm+pt			pm+pt		
Protected Phases		6		5	2		3	8		7	4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	25.0	25.0		36.0	36.0		40.1	33.1		39.9	33.0	
Effective Green, g (s)	26.0	26.0		37.0	37.0		41.1	34.1		40.9	34.0	
Actuated g/C Ratio	0.29	0.29		0.41	0.41		0.46	0.38		0.45	0.38	
Clearance Time (s)	5.0	5.0		3.5	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	1295		197	1865		197	1717		195	1692	
v/s Ratio Prot		0.38		0.08	c0.57		c0.07	c0.50		0.05	0.43	
v/s Ratio Perm	c0.96			0.33			0.36			0.22		
v/c Ratio	3.34	1.32		1.00	1.39		0.94	1.31		0.59	1.13	
Uniform Delay, d1	32.0	32.0		43.7	26.5		21.1	27.9		20.9	28.0	
Progression Factor	0.69	0.68		1.00	1.00		1.68	0.35		1.00	1.00	
Incremental Delay, d2	1066.4	145.9		64.1	179.7		8.6	141.1		4.8	65.4	
Delay (s)	1088.5	167.8		107.8	206.2		44.1	150.8		25.7	93.4	
Level of Service	F	F		F	F		D	F		C	F	
Approach Delay (s)		283.2			199.2			142.8			89.5	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	178.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	137.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3090		1583	3126		1583	4511		1583	4477	
Flt Permitted	0.15	1.00		0.13	1.00		0.12	1.00		0.14	1.00	
Satd. Flow (perm)	253	3090		220	3126		202	4511		230	4477	
Volume (vph)	106	875	168	159	1511	140	381	2158	132	78	1712	207
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	109	902	173	164	1558	144	393	2225	136	80	1765	213
RTOR Reduction (vph)	0	18	0	0	1	0	0	7	0	0	9	0
Lane Group Flow (vph)	109	1057	0	164	1701	0	393	2354	0	80	1969	0
Turn Type	Perm		pm+pt		pm+pt		Perm					
Protected Phases	8		7		4		1		6		2	
Permitted Phases	8		4				6				2	
Actuated Green, G (s)	25.3	25.3		38.0	38.0		42.0	42.0		28.0	28.0	
Effective Green, g (s)	26.3	26.3		39.0	39.0		43.0	43.0		29.0	29.0	
Actuated g/C Ratio	0.29	0.29		0.43	0.43		0.48	0.48		0.32	0.32	
Clearance Time (s)	5.0	5.0		3.0	5.0		4.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	903		227	1355		250	2155		74	1443	
v/s Ratio Prot		0.34		0.07	c0.54		c0.17	0.52			0.44	
v/s Ratio Perm	c0.43			0.24			c0.58			0.35		
v/c Ratio	1.47	1.17		0.72	1.26		1.57	1.09		1.08	1.36	
Uniform Delay, d1	31.8	31.8		21.0	25.5		42.2	23.5		30.5	30.5	
Progression Factor	1.00	1.00		0.73	0.95		1.00	1.00		1.00	0.97	
Incremental Delay, d2	272.1	88.7		1.0	115.4		275.9	49.7		55.6	164.3	
Delay (s)	303.9	120.6		16.4	139.6		318.1	73.2		86.0	193.9	
Level of Service	F	F		B	F		F	E		F	F	
Approach Delay (s)		137.5			128.8			108.2			189.7	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	138.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	139.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		0.98	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3090		1558	3103		1583	3135		1568	3029	
Flt Permitted	0.06	1.00		0.30	1.00		0.09	1.00		0.14	1.00	
Satd. Flow (perm)	100	3090		498	3103		147	3135		226	3029	
Volume (vph)	80	597	76	132	1453	124	119	810	38	108	810	154
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	90	671	85	148	1633	139	134	910	43	121	910	173
RTOR Reduction (vph)	0	8	0	0	5	0	0	3	0	0	9	0
Lane Group Flow (vph)	90	748	0	148	1767	0	134	950	0	121	1074	0
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	6		2		2		8		8		4	
Permitted Phases	6		2		2		8		8		4	
Actuated Green, G (s)	64.6	64.6		64.6	64.6		44.1	44.1		44.1	44.1	
Effective Green, g (s)	66.5	66.5		66.5	66.5		45.5	45.5		45.5	45.5	
Actuated g/C Ratio	0.55	0.55		0.55	0.55		0.38	0.38		0.38	0.38	
Clearance Time (s)	5.9	5.9		5.9	5.9		5.4	5.4		5.4	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	55	1712		276	1720		56	1189		86	1148	
v/s Ratio Prot		0.24			0.57			0.30			0.35	
v/s Ratio Perm	c0.90		0.30		0.30		c0.91		0.30		0.54	
v/c Ratio	1.64	0.44		0.54	1.03		2.39	0.80		1.41	0.94	
Uniform Delay, d1	26.8	15.7		17.0	26.8		37.2	33.2		37.2	35.8	
Progression Factor	1.00	1.00		0.56	0.74		1.19	1.18		1.00	1.00	
Incremental Delay, d2	354.4	0.8		0.7	15.1		665.3	4.3		238.7	15.0	
Delay (s)	381.1	16.5		10.1	34.9		709.6	43.3		275.9	50.8	
Level of Service	F	B		B	C		F	D		F	D	
Approach Delay (s)		55.3			33.0			125.4			73.4	
Approach LOS		E			C			F			E	

Intersection Summary

HCM Average Control Delay	66.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	110.8%	ICU Level of Service	H
Analysis Period (min)	15		




























c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1583	4531		1583	4542			1613			1590	
Flt Permitted	0.06	1.00		0.16	1.00			0.97			0.95	
Satd. Flow (perm)	100	4531		267	4542			1573			1517	
Volume (vph)	21	1285	37	44	2640	32	19	177	52	22	99	51
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	22	1339	39	46	2750	33	20	184	54	23	103	53
RTOR Reduction (vph)	0	3	0	0	1	0	0	10	0	0	3	0
Lane Group Flow (vph)	22	1375	0	46	2782	0	0	248	0	0	176	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	68.0	68.0		68.0	68.0			26.0			26.0	
Effective Green, g (s)	67.0	67.0		67.0	67.0			25.0			25.0	
Actuated g/C Ratio	0.67	0.67		0.67	0.67			0.25			0.25	
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0			3.0			3.0	
Lane Grp Cap (vph)	67	3036		179	3043			393			379	
v/s Ratio Prot		0.30			c0.61							
v/s Ratio Perm	0.22			0.17				c0.16			0.12	
v/c Ratio	0.33	0.45		0.26	0.91			0.63			0.46	
Uniform Delay, d1	7.0	7.8		6.6	14.1			33.4			31.8	
Progression Factor	0.58	0.31		0.25	0.77			1.00			1.00	
Incremental Delay, d2	9.0	0.3		0.3	0.6			7.5			4.0	
Delay (s)	13.1	2.8		2.0	11.4			40.9			35.9	
Level of Service	B	A		A	B			D			D	
Approach Delay (s)		2.9			11.2			40.9			35.9	
Approach LOS		A			B			D			D	

Intersection Summary

HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			  							
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3167	1417	1583	4550	1417	1583	1667	1417	1583	1646	
Flt Permitted	0.23	1.00	1.00	0.25	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	388	3167	1417	410	4550	1417	1583	1667	1417	1583	1646	
Volume (vph)	87	627	59	108	1424	93	82	583	35	40	727	66
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	94	674	63	116	1531	100	88	627	38	43	782	71
RTOR Reduction (vph)	0	0	45	0	0	71	0	0	21	0	5	0
Lane Group Flow (vph)	94	674	18	116	1531	29	88	627	17	43	848	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4			4		1	2		1	6	
Permitted Phases	4		4	4		4			2			
Actuated Green, G (s)	16.2	16.2	16.2	16.2	16.2	16.2	3.4	26.6	26.6	3.4	26.6	
Effective Green, g (s)	17.2	17.2	17.2	17.2	17.2	17.2	3.4	27.4	27.4	3.4	27.4	
Actuated g/C Ratio	0.29	0.29	0.29	0.29	0.29	0.29	0.06	0.46	0.46	0.06	0.46	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.8	4.8	4.0	4.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	908	406	118	1304	406	90	761	647	90	752	
v/s Ratio Prot		0.21			c0.34		c0.06	0.38		0.03	c0.51	
v/s Ratio Perm	0.24		0.01	0.28		0.02			0.01			
v/c Ratio	0.85	0.74	0.04	0.98	1.17	0.07	0.98	0.82	0.03	0.48	1.13	
Uniform Delay, d1	20.2	19.4	15.5	21.3	21.4	15.6	28.3	14.2	9.0	27.4	16.3	
Progression Factor	1.00	1.00	1.00	1.27	1.36	1.72	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	51.4	5.5	0.2	70.1	85.2	0.3	86.7	9.8	0.1	4.0	73.7	
Delay (s)	71.5	24.8	15.7	97.2	114.3	27.0	114.9	24.0	9.0	31.4	90.0	
Level of Service	E	C	B	F	F	C	F	C	A	C	F	
Approach Delay (s)		29.4			108.1			33.9			87.2	
Approach LOS		C			F			C			F	
Intersection Summary												
HCM Average Control Delay			75.0				HCM Level of Service		E			
HCM Volume to Capacity ratio			1.13									
Actuated Cycle Length (s)			60.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			104.7%				ICU Level of Service		G			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Fr _t	1.00	0.98		1.00	1.00		1.00	0.98		1.00	0.98	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4480		1583	4529		1583	3108		1583	3104	
Fl _t Permitted	0.09	1.00		0.11	1.00		0.13	1.00		0.14	1.00	
Satd. Flow (perm)	153	4480		179	4529		215	3108		242	3104	
Volume (vph)	95	1171	134	54	2427	78	138	687	98	53	820	125
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	102	1259	144	58	2610	84	148	739	105	57	882	134
RTOR Reduction (vph)	0	14	0	0	3	0	0	10	0	0	12	0
Lane Group Flow (vph)	102	1389	0	58	2691	0	148	834	0	57	1004	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	52.1	44.6		48.7	42.9		40.0	32.0		35.2	29.6	
Effective Green, g (s)	50.1	43.6		46.7	41.9		38.0	31.0		33.2	28.6	
Actuated g/C Ratio	0.50	0.44		0.47	0.42		0.38	0.31		0.33	0.29	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	170	1953		151	1898		177	963		142	888	
v/s Ratio Prot	c0.04	0.31		0.02	c0.59		c0.06	0.27		0.02	c0.32	
v/s Ratio Perm	0.26			0.16			0.26			0.11		
v/c Ratio	0.60	0.71		0.38	1.42		0.84	0.87		0.40	1.13	
Uniform Delay, d ₁	46.7	23.1		16.5	29.1		25.5	32.5		24.6	35.7	
Progression Factor	2.13	2.01		1.31	1.48		1.00	1.00		1.00	1.00	
Incremental Delay, d ₂	3.0	1.8		0.2	189.2		26.5	10.3		0.7	72.9	
Delay (s)	102.4	48.1		21.9	232.3		52.0	42.8		25.3	108.6	
Level of Service	F	D		C	F		D	D		C	F	
Approach Delay (s)		51.8			227.9			44.2			104.1	
Approach LOS		D			F			D			F	

Intersection Summary

HCM Average Control Delay	136.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	111.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4482		1583	4542		1583	3082		1583	3105	
Flt Permitted	0.11	1.00		0.10	1.00		0.15	1.00		0.17	1.00	
Satd. Flow (perm)	183	4482		172	4542		255	3082		282	3105	
Volume (vph)	77	1482	164	182	2565	31	188	888	194	54	866	130
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	82	1577	174	194	2729	33	200	945	206	57	921	138
RTOR Reduction (vph)	0	15	0	0	1	0	0	20	0	0	13	0
Lane Group Flow (vph)	82	1736	0	194	2761	0	200	1131	0	57	1046	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	43.0	37.4		47.8	39.8		35.1	27.1		30.1	24.6	
Effective Green, g (s)	41.0	36.4		45.8	38.8		33.1	26.1		28.1	23.6	
Actuated g/C Ratio	0.46	0.40		0.51	0.43		0.37	0.29		0.31	0.26	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	155	1813		197	1958		197	894		153	814	
v/s Ratio Prot	0.03	0.39		c0.08	c0.61		c0.08	c0.37		0.02	0.34	
v/s Ratio Perm	0.21			0.42			0.29			0.10		
v/c Ratio	0.53	0.96		0.98	1.41		1.02	1.27		0.37	1.28	
Uniform Delay, d1	21.4	26.0		21.2	25.6		43.7	31.9		42.1	33.2	
Progression Factor	1.00	1.00		1.94	0.40		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	13.2		15.6	184.8		68.1	128.3		0.6	137.4	
Delay (s)	22.9	39.3		56.7	195.0		111.8	160.2		42.7	170.6	
Level of Service	C	D		E	F		F	F		D	F	
Approach Delay (s)		38.6			185.9			153.1			164.1	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	139.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	117.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑	↗	↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.98		1.00	1.00		1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	4467		1583	4541		1583	1667	1417	1583	2996	
Flt Permitted	0.09	1.00		0.10	1.00		0.12	1.00	1.00	0.13	1.00	
Satd. Flow (perm)	156	4467		171	4541		206	1667	1417	218	2996	
Volume (vph)	100	1173	163	69	2640	36	137	537	93	51	606	341
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	1235	172	73	2779	38	144	565	98	54	638	359
RTOR Reduction (vph)	0	18	0	0	1	0	0	0	66	0	77	0
Lane Group Flow (vph)	105	1389	0	73	2816	0	144	565	32	54	920	0
Turn Type	pm+pt			pm+pt			pm+pt			Perm	pm+pt	
Protected Phases	5	2		1	6		3	8	8		7	4
Permitted Phases	2			6			8		8		4	
Actuated Green, G (s)	50.6	43.8		48.2	42.6		40.4	33.4	33.4	36.8	31.6	
Effective Green, g (s)	48.6	42.8		46.2	41.6		38.4	32.4	32.4	34.8	30.6	
Actuated g/C Ratio	0.49	0.43		0.46	0.42		0.38	0.32	0.32	0.35	0.31	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	159	1912		144	1889		162	540	459	133	917	
v/s Ratio Prot	c0.04	0.31		0.02	c0.62		c0.05	c0.34		0.02	0.31	
v/s Ratio Perm	0.28			0.21			0.29		0.02	0.12		
v/c Ratio	0.66	0.73		0.51	1.49		0.89	1.05	0.07	0.41	1.00	
Uniform Delay, d1	23.3	23.7		17.3	29.2		25.4	33.8	23.4	25.3	34.7	
Progression Factor	0.78	1.08		2.14	1.80		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.6	2.1		0.1	221.1		39.1	51.4	0.3	0.7	30.5	
Delay (s)	24.7	27.8		37.0	273.6		64.5	85.2	23.7	26.0	65.2	
Level of Service	C	C		D	F		E	F	C	C	E	
Approach Delay (s)		27.5			267.6			74.0			63.2	
Approach LOS		C			F			E			E	

Intersection Summary

HCM Average Control Delay	150.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	116.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	2222		1118	2232		1118	2177		1118	2231	
Flt Permitted	0.07	1.00		0.09	1.00		0.28	1.00		0.66	1.00	
Satd. Flow (perm)	77	2222		106	2232		331	2177		781	2231	
Volume (vph)	27	1549	66	53	2105	22	10	112	23	114	492	7
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	28	1597	68	55	2170	23	10	115	24	118	507	7
RTOR Reduction (vph)	0	3	0	0	1	0	0	18	0	0	1	0
Lane Group Flow (vph)	28	1662	0	55	2192	0	10	121	0	118	513	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	60.5	60.5		60.5	60.5		20.8	20.8		20.8	20.8	
Effective Green, g (s)	61.0	61.0		61.0	61.0		21.0	21.0		21.0	21.0	
Actuated g/C Ratio	0.68	0.68		0.68	0.68		0.23	0.23		0.23	0.23	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	52	1506		72	1513		77	508		182	521	
v/s Ratio Prot		0.75			c0.98			0.06			c0.23	
v/s Ratio Perm	0.36			0.52			0.03			0.15		
v/c Ratio	0.54	1.10		0.76	1.45		0.13	0.24		0.65	0.99	
Uniform Delay, d1	7.4	14.5		9.7	14.5		27.3	28.0		31.2	34.3	
Progression Factor	0.35	0.38		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.6	47.7		53.7	205.7		3.5	1.1		16.5	35.9	
Delay (s)	6.2	53.2		63.4	220.2		30.7	29.1		47.7	70.3	
Level of Service	A	D		E	F		C	C		D	E	
Approach Delay (s)		52.4			216.4			29.2			66.1	
Approach LOS		D			F			C			E	

Intersection Summary

HCM Average Control Delay	131.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	129.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						0.95			0.95	
Frbp, ped/bikes		1.00						1.00			1.00	
Flpb, ped/bikes		0.99						1.00			1.00	
Frt		0.99						0.97			1.00	
Flt Protected		0.98						1.00			0.99	
Satd. Flow (prot)		3031						3053			3145	
Flt Permitted		0.98						1.00			0.90	
Satd. Flow (perm)		3031						3053			2858	
Volume (vph)	174	212	17	0	0	0	0	98	26	38	274	0
Peak-hour factor, PHF	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Adj. Flow (vph)	226	275	22	0	0	0	0	127	34	49	356	0
RTOR Reduction (vph)	0	3	0	0	0	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	520	0	0	0	0	0	136	0	0	405	0
Conf. Peds. (#/hr)	28		18	18			28	6		7	7	6
Conf. Bikes (#/hr)			1							1		1
Turn Type	Perm						Perm					
Protected Phases		2						8			4	
Permitted Phases	2									4		
Actuated Green, G (s)		37.0						17.0			17.0	
Effective Green, g (s)		36.0						16.0			16.0	
Actuated g/C Ratio		0.60						0.27			0.27	
Clearance Time (s)		3.0						3.0			3.0	
Vehicle Extension (s)		5.0						3.0			3.0	
Lane Grp Cap (vph)		1819						814			762	
v/s Ratio Prot								0.04				
v/s Ratio Perm		0.17									c0.14	
v/c Ratio		0.29						0.17			0.53	
Uniform Delay, d1		5.8						16.9			18.8	
Progression Factor		1.15						1.00			1.00	
Incremental Delay, d2		0.3						0.4			2.6	
Delay (s)		6.9						17.3			21.4	
Level of Service		A						B			C	
Approach Delay (s)		6.9			0.0			17.3			21.4	
Approach LOS		A			A			B			C	
Intersection Summary												
HCM Average Control Delay			13.9					HCM Level of Service			B	
HCM Volume to Capacity ratio			0.36									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)			8.0	
Intersection Capacity Utilization			54.1%					ICU Level of Service			A	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑				↗		↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0				4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91				1.00		1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99				0.97		1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		0.98	1.00
Frt	1.00	1.00		1.00	0.98				0.86		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00				1.00		0.95	1.00
Satd. Flow (prot)	1583	4527		1583	4397				1396		1562	1371
Flt Permitted	0.95	1.00		0.95	1.00				1.00		0.95	1.00
Satd. Flow (perm)	1583	4527		1583	4397				1396		1562	1371
Volume (vph)	48	1341	26	116	2413	463	0	0	45	135	7	166
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	50	1397	27	121	2514	482	0	0	47	141	7	173
RTOR Reduction (vph)	0	2	0	0	23	0	0	0	36	0	0	133
Lane Group Flow (vph)	50	1422	0	121	2973	0	0	0	11	0	148	40
Confl. Peds. (#/hr)	18		42	42		18	15		14	14		15
Confl. Bikes (#/hr)			2			1			1			
Turn Type	Prot			Prot				custom	Perm		Perm	
Protected Phases	5	2		1	6						4	
Permitted Phases								8	4			4
Actuated Green, G (s)	5.4	55.7		11.3	61.6			24.0			24.0	24.0
Effective Green, g (s)	4.4	54.7		10.3	60.6			23.0			23.0	23.0
Actuated g/C Ratio	0.04	0.55		0.10	0.61			0.23			0.23	0.23
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Vehicle Extension (s)	2.0	5.0		2.0	5.0			3.0			3.0	3.0
Lane Grp Cap (vph)	70	2476		163	2665			321			359	315
v/s Ratio Prot	0.03	0.31		c0.08	c0.68							
v/s Ratio Perm								0.01			0.09	0.03
v/c Ratio	0.71	0.57		0.74	1.12			0.03			0.41	0.13
Uniform Delay, d1	47.2	15.0		43.6	19.7			29.9			32.8	30.5
Progression Factor	1.00	1.00		0.70	1.88			1.00			1.00	1.00
Incremental Delay, d2	24.8	1.0		1.5	52.5			0.2			3.5	0.8
Delay (s)	72.0	15.9		32.0	89.6			30.1			36.2	31.4
Level of Service	E	B		C	F			C			D	C
Approach Delay (s)		17.8			87.4			30.1			33.6	
Approach LOS		B			F			C			C	

Intersection Summary			
HCM Average Control Delay	62.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	2230		1118	2233		1118	2216		1118	2203	
Flt Permitted	0.07	1.00		0.07	1.00		0.15	1.00		0.29	1.00	
Satd. Flow (perm)	84	2230		84	2233		181	2216		343	2203	
Volume (vph)	32	1650	25	229	1970	15	26	523	32	26	753	81
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	33	1684	26	234	2010	15	27	534	33	27	768	83
RTOR Reduction (vph)	0	1	0	0	1	0	0	5	0	0	9	0
Lane Group Flow (vph)	33	1709	0	234	2024	0	27	562	0	27	842	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	55.5	55.5		55.5	55.5		25.8	25.8		25.8	25.8	
Effective Green, g (s)	56.0	56.0		56.0	56.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio	0.62	0.62		0.62	0.62		0.29	0.29		0.29	0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	52	1388		52	1389		52	640		99	636	
v/s Ratio Prot		0.77			0.91			0.25			c0.38	
v/s Ratio Perm	0.39			c2.78			0.15			0.08		
v/c Ratio	0.63	1.23		4.50	1.46		0.52	0.88		0.27	1.32	
Uniform Delay, d1	10.6	17.0		17.0	17.0		26.8	30.5		24.7	32.0	
Progression Factor	1.00	1.00		0.59	0.59		0.43	0.35		1.00	1.00	
Incremental Delay, d2	46.8	110.5		1579.0	206.2		13.2	6.8		6.7	156.4	
Delay (s)	57.4	127.5		1589.0	216.2		24.6	17.5		31.4	188.4	
Level of Service	E	F		F	F		C	B		C	F	
Approach Delay (s)		126.2			358.4			17.9			183.5	
Approach LOS		F			F			B			F	

Intersection Summary

HCM Average Control Delay	219.5	HCM Level of Service	F
HCM Volume to Capacity ratio	3.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	142.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↗	↕		↗	↕	↗		↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00		0.95	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1118	2205		1118	2231		1118	2235	1000		2211	
Flt Permitted	0.07	1.00		0.23	1.00		0.15	1.00	1.00		1.00	
Satd. Flow (perm)	84	2205		276	2231		181	2235	1000		2211	
Volume (vph)	59	821	80	222	1756	24	65	498	98	0	914	70
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	912	89	247	1951	27	72	553	109	0	1016	78
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	78	0	6	0
Lane Group Flow (vph)	66	998	0	247	1977	0	72	553	31	0	1088	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			8		4
Permitted Phases	2			6			8			8		
Actuated Green, G (s)	55.5	55.5		55.5	55.5		25.8	25.8	25.8		25.8	
Effective Green, g (s)	56.0	56.0		56.0	56.0		26.0	26.0	26.0		26.0	
Actuated g/C Ratio	0.62	0.62		0.62	0.62		0.29	0.29	0.29		0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2	4.2		4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	52	1372		172	1388		52	646	289		639	
v/s Ratio Prot		0.45			0.89			0.25			c0.49	
v/s Ratio Perm	0.79			c0.89			0.40		0.03			
v/c Ratio	1.27	0.73		1.44	1.42		1.38	0.86	0.11		1.70	
Uniform Delay, d1	17.0	11.7		17.0	17.0		32.0	30.2	23.5		32.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		0.61	
Incremental Delay, d2	213.7	3.4		226.1	195.2		257.0	13.7	0.8		316.5	
Delay (s)	230.7	15.1		243.1	212.2		289.0	43.9	24.3		335.9	
Level of Service	F	B		F	F		F	D	C		F	
Approach Delay (s)		28.5			215.6			65.0			335.9	
Approach LOS		C			F			E			F	

Intersection Summary

HCM Average Control Delay	180.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	149.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						0.95			0.95	
Frbp, ped/bikes		0.99						0.98			1.00	
Flpb, ped/bikes		0.99						1.00			1.00	
Frt		0.93						0.96			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		2862						2980			3144	
Flt Permitted		0.99						1.00			0.65	
Satd. Flow (perm)		2862						2980			2064	
Volume (vph)	35	114	139	0	0	0	0	763	234	86	700	0
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	38	125	153	0	0	0	0	838	257	95	769	0
RTOR Reduction (vph)	0	58	0	0	0	0	0	48	0	0	0	0
Lane Group Flow (vph)	0	258	0	0	0	0	0	1047	0	0	864	0
Confl. Peds. (#/hr)	123		3	3			123	1		108	108	1
Confl. Bikes (#/hr)							6			4		2
Turn Type	Perm						Perm					
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		27.0						27.0			27.0	
Effective Green, g (s)		26.0						26.0			26.0	
Actuated g/C Ratio		0.43						0.43			0.43	
Clearance Time (s)		3.0						3.0			3.0	
Vehicle Extension (s)		3.0						3.0			3.0	
Lane Grp Cap (vph)		1240						1291			894	
v/s Ratio Prot								0.35				
v/s Ratio Perm		0.09									c0.42	
v/c Ratio		0.21						0.81			0.97	
Uniform Delay, d1		10.6						14.9			16.6	
Progression Factor		0.59						1.00			1.00	
Incremental Delay, d2		0.4						5.6			23.0	
Delay (s)		6.6						20.5			39.6	
Level of Service		A						C			D	
Approach Delay (s)		6.6			0.0			20.5			39.6	
Approach LOS		A			A			C			D	
Intersection Summary												
HCM Average Control Delay			25.8					HCM Level of Service			C	
HCM Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)		8.0		
Intersection Capacity Utilization			85.3%					ICU Level of Service		E		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖		↖	↖↖↖		↖	↖↖	↖		↖↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00		0.95	1.00
Frbp, ped/bikes	1.00	0.97		1.00	0.99		1.00	1.00	0.86		1.00	0.86
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1583	4332		1583	4470		1583	3167	1219		3167	1220
Flt Permitted	0.10	1.00		0.09	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	159	4332		145	4470		1583	3167	1219		3167	1220
Volume (vph)	61	1226	202	334	2104	91	296	884	102	0	774	193
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	64	1277	210	348	2192	95	308	921	106	0	806	201
RTOR Reduction (vph)	0	23	0	0	4	0	0	0	68	0	0	124
Lane Group Flow (vph)	64	1464	0	348	2283	0	308	921	38	0	806	77
Conf. Peds. (#/hr)	202		139	139		202	96		97	97		96
Conf. Bikes (#/hr)						3			1			1
Turn Type	pm+pt			pm+pt			Prot		Perm			Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases	2			6					8			4
Actuated Green, G (s)	48.4	43.0		56.0	47.6		9.9	35.9	35.9		22.9	22.9
Effective Green, g (s)	46.4	42.0		55.0	46.6		9.0	35.0	35.0		22.0	22.0
Actuated g/C Ratio	0.47	0.43		0.56	0.48		0.09	0.36	0.36		0.22	0.22
Clearance Time (s)	3.0	3.0		3.0	3.0		3.1	3.1	3.1		3.1	3.1
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	139	1857		213	2126		145	1131	435		711	274
v/s Ratio Prot	0.02	0.34		c0.15	0.51		c0.19	0.29			c0.25	
v/s Ratio Perm	0.20			c0.77					0.03			0.06
v/c Ratio	0.46	0.79		1.63	1.07		2.12	0.81	0.09		1.13	0.28
Uniform Delay, d1	21.2	24.2		25.9	25.7		44.5	28.6	20.9		38.0	31.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.9	3.5		305.5	42.8		528.3	6.5	0.4		76.9	2.5
Delay (s)	22.1	27.7		331.4	68.5		572.8	35.0	21.3		114.9	34.0
Level of Service	C	C		F	E		F	D	C		F	C
Approach Delay (s)		27.4			103.2			158.0			98.8	
Approach LOS		C			F			F			F	

Intersection Summary

HCM Average Control Delay	95.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	98.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕		↕	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.95			0.98		1.00	1.00		1.00	0.99	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2986			3063		1583	3153		1583	3132	
Flt Permitted		0.85			0.76		0.15	1.00		0.12	1.00	
Satd. Flow (perm)		2554			2373		245	3153		201	3132	
Volume (vph)	29	107	69	196	294	55	113	1221	36	44	997	78
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	30	110	71	202	303	57	116	1259	37	45	1028	80
RTOR Reduction (vph)	0	49	0	0	10	0	0	2	0	0	6	0
Lane Group Flow (vph)	0	162	0	0	552	0	116	1294	0	45	1102	0
Turn Type		Perm		Perm		pm+pt		pm+pt		pm+pt		
Protected Phases		4		8		5		2		1		6
Permitted Phases		4		8		2				6		
Actuated Green, G (s)		29.0		29.0		54.6		48.3		49.4		45.7
Effective Green, g (s)		28.0		28.0		52.6		47.3		47.4		44.7
Actuated g/C Ratio		0.31		0.31		0.58		0.53		0.53		0.50
Clearance Time (s)		3.0		3.0		3.0		3.0		3.0		3.0
Vehicle Extension (s)		3.0		3.0		2.0		5.0		2.0		5.0
Lane Grp Cap (vph)		795		738		222		1657		147		1556
v/s Ratio Prot						c0.03		c0.41		0.01		0.35
v/s Ratio Perm		0.06		c0.23		0.27				0.15		
v/c Ratio		0.20		0.75		0.52		0.78		0.31		0.71
Uniform Delay, d1		22.8		27.8		11.5		17.2		12.8		17.6
Progression Factor		1.00		1.00		1.00		1.00		1.00		1.00
Incremental Delay, d2		0.6		4.2		1.0		3.7		0.4		2.8
Delay (s)		23.4		32.0		12.6		20.9		13.2		20.3
Level of Service		C		C		B		C		B		C
Approach Delay (s)		23.4		32.0				20.2				20.1
Approach LOS		C		C				C				C

Intersection Summary

HCM Average Control Delay	22.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑			↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95			0.95	
Frt	1.00	0.99		1.00	1.00		1.00	0.99			0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1583	4525		1583	4550		1583	3134			3059	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1583	4525		1583	4550		1583	3134			3059	
Volume (vph)	36	1856	71	10	3178	0	40	688	51	0	420	123
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	36	1875	72	10	3210	0	40	695	52	0	424	124
RTOR Reduction (vph)	0	4	0	0	0	0	0	6	0	0	30	0
Lane Group Flow (vph)	36	1943	0	10	3210	0	40	741	0	0	518	0
Turn Type	Prot		Prot		Split							
Protected Phases	1!	2!		5!	6!		8	8			7	
Permitted Phases												
Actuated Green, G (s)	5.3	33.7		4.8	33.2		14.0	14.0			22.0	
Effective Green, g (s)	4.8	33.2		4.8	33.2		14.0	14.0			22.0	
Actuated g/C Ratio	0.05	0.37		0.05	0.37		0.16	0.16			0.24	
Clearance Time (s)	3.5	3.5		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	84	1669		84	1678		246	488			748	
v/s Ratio Prot	c0.02	0.43		0.01	c0.71		0.03	c0.24			c0.17	
v/s Ratio Perm												
v/c Ratio	0.43	1.16		0.12	1.91		0.16	1.52			0.69	
Uniform Delay, d1	41.3	28.4		40.6	28.4		32.9	38.0			30.9	
Progression Factor	1.22	0.99		1.52	0.38		1.00	1.00			1.00	
Incremental Delay, d2	0.3	74.4		0.1	411.0		0.3	243.7			5.2	
Delay (s)	50.9	102.5		61.7	421.8		33.2	281.7			36.1	
Level of Service	D	F		E	F		C	F			D	
Approach Delay (s)		101.5			420.7			269.1			36.1	
Approach LOS		F			F			F			D	

Intersection Summary

HCM Average Control Delay	273.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.2%	ICU Level of Service	G
Analysis Period (min)	15		

- ! Phase conflict between lane groups.
- c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↓		↑	↑↑↓		↑	↑↓		↑	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt		0.99		1.00	0.99		1.00	0.99		1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4521		1583	4518		1583	3138		1583	3167	
Flt Permitted		1.00		0.95	1.00		0.33	1.00		0.18	1.00	
Satd. Flow (perm)		4521		1583	4518		544	3138		303	3167	
Volume (vph)	0	1812	81	26	2889	142	262	933	60	62	453	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1907	85	27	3041	149	276	982	63	65	477	0
RTOR Reduction (vph)	0	5	0	0	5	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	1987	0	27	3185	0	276	1040	0	65	477	0
Turn Type				Prot			Perm			Perm		
Protected Phases		2!		5!	6			7			7	
Permitted Phases							7			7		
Actuated Green, G (s)		33.7		4.8	33.2		22.0	22.0		22.0	22.0	
Effective Green, g (s)		33.2		4.8	33.2		22.0	22.0		22.0	22.0	
Actuated g/C Ratio		0.37		0.05	0.37		0.24	0.24		0.24	0.24	
Clearance Time (s)		3.5		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1668		84	1667		133	767		74	774	
v/s Ratio Prot		0.44		c0.02	c0.70			0.33			0.15	
v/s Ratio Perm							c0.51			0.21		
v/c Ratio		1.19		0.32	1.91		2.08	1.36		0.88	0.62	
Uniform Delay, d1		28.4		41.0	28.4		34.0	34.0		32.7	30.2	
Progression Factor		0.28		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		86.6		2.2	412.0		508.7	168.5		74.4	3.7	
Delay (s)		94.7		43.2	440.4		542.7	202.5		107.1	33.9	
Level of Service		F		D	F		F	F		F	C	
Approach Delay (s)		94.7			437.1			273.6			42.7	
Approach LOS		F			F			F			D	

Intersection Summary

HCM Average Control Delay	279.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	30.0
Intersection Capacity Utilization	111.0%	ICU Level of Service	H
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕		↕	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0		4.0	4.0	
Lane Util. Factor		0.95						0.95		1.00	0.95	
Frbp, ped/bikes		1.00						0.97		1.00	1.00	
Flpb, ped/bikes		0.99						1.00		0.95	1.00	
Frt		1.00						0.94		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		3125						2890		1507	3167	
Flt Permitted		1.00						1.00		0.64	1.00	
Satd. Flow (perm)		3125						2890		1013	3167	
Volume (vph)	16	243	5	0	0	0	0	93	62	59	427	0
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	19	283	6	0	0	0	0	108	72	69	497	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	53	0	0	0	0
Lane Group Flow (vph)	0	306	0	0	0	0	0	127	0	69	497	0
Confl. Peds. (#/hr)	51		52	52			51	5		55	55	
Confl. Bikes (#/hr)							3					5
Turn Type		Perm									Perm	
Protected Phases		2						4			4	
Permitted Phases		2									4	
Actuated Green, G (s)		17.0						17.0		17.0	17.0	
Effective Green, g (s)		16.0						16.0		16.0	16.0	
Actuated g/C Ratio		0.27						0.27		0.27	0.27	
Clearance Time (s)		3.0						3.0		3.0	3.0	
Vehicle Extension (s)		5.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		833						771		270	845	
v/s Ratio Prot								0.04			c0.16	
v/s Ratio Perm		0.10								0.07		
v/c Ratio		0.37						0.16		0.26	0.59	
Uniform Delay, d1		17.9						16.9		17.3	19.1	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		1.2						0.5		2.3	3.0	
Delay (s)		19.1						17.3		19.6	22.1	
Level of Service		B						B		B	C	
Approach Delay (s)		19.1			0.0			17.3			21.8	
Approach LOS		B			A			B			C	
Intersection Summary												
HCM Average Control Delay			20.3					HCM Level of Service			C	
HCM Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)		28.0		
Intersection Capacity Utilization			83.0%					ICU Level of Service		E		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗			↖↗		↖	↗		↖	↗	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91			0.91		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00			0.99		1.00	0.90		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			1.00		0.84	1.00		1.00	1.00	1.00
Frt	1.00	1.00			1.00		1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4525			4511		1334	1420		1583	1667	1102
Flt Permitted	0.08	1.00			1.00		0.62	1.00		0.95	1.00	1.00
Satd. Flow (perm)	132	4525			4511		872	1420		1583	1667	1102
Volume (vph)	39	1266	14	0	2457	47	105	76	42	90	211	110
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	41	1319	15	0	2559	49	109	79	44	94	220	115
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	0	0	0	0
Lane Group Flow (vph)	41	1333	0	0	2606	0	109	123	0	94	220	115
Conf. Peds. (#/hr)	244		131	131		244	166		211	211		166
Conf. Bikes (#/hr)			3			5			2			3
Turn Type	Perm			Perm			Prot			custom		
Protected Phases	2			6			8			7		
Permitted Phases	2						8			4 4		
Actuated Green, G (s)	51.4	51.4			51.4		21.0	21.0		8.6	32.6	32.6
Effective Green, g (s)	50.4	50.4			50.4		20.0	20.0		7.6	31.6	31.6
Actuated g/C Ratio	0.56	0.56			0.56		0.22	0.22		0.08	0.35	0.35
Clearance Time (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Vehicle Extension (s)	5.0	5.0			5.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	2534			2526		194	316		134	585	387
v/s Ratio Prot		0.29			c0.58			0.09		c0.06		
v/s Ratio Perm	0.31						c0.13				0.13	0.10
v/c Ratio	0.55	0.53			1.03		0.56	0.39		0.70	0.38	0.30
Uniform Delay, d1	12.6	12.3			19.8		31.1	29.8		40.1	21.8	21.2
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	26.7	0.8			26.6		11.3	3.6		15.3	1.8	2.0
Delay (s)	39.3	13.1			46.4		42.4	33.4		55.4	23.7	23.1
Level of Service	D	B			D		D	C		E	C	C
Approach Delay (s)		13.9			46.4			37.6			30.5	
Approach LOS		B			D			D			C	

Intersection Summary

HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			






























Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR2	
Lane Configurations		↔	↔↔↔		↔	↔↔↔			↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	
Total Lost time (s)		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00	
Frbp, ped/bikes		1.00	1.00		1.00	0.99			1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	
Frt		1.00	1.00		1.00	0.99			0.86	
Flt Protected		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)		1583	4521		1583	4482			1442	
Flt Permitted		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)		1583	4521		1583	4482			1442	
Volume (vph)	343	251	1318	36	561	1905	42	41	32	
Peak-hour factor, PHF	0.92	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.92	
Adj. Flow (vph)	373	261	1373	38	584	1984	44	43	35	
RTOR Reduction (vph)	0	0	3	0	0	2	0	0	31	
Lane Group Flow (vph)	0	634	1408	0	584	2069	0	0	4	
Conf. Peds. (#/hr)	63	81		28	28		63	81	35	
Conf. Bikes (#/hr)				5			9	10	1	
Turn Type	Prot	Prot			Prot				custom	
Protected Phases	1	1	2		8	6			1	
Permitted Phases										
Actuated Green, G (s)		13.0	52.0		26.0	81.0			13.0	
Effective Green, g (s)		12.0	51.0		25.0	80.0			12.0	
Actuated g/C Ratio		0.12	0.51		0.25	0.80			0.12	
Clearance Time (s)		3.0	3.0		3.0	3.0			3.0	
Vehicle Extension (s)		2.5	5.0		3.0	5.0			2.5	
Lane Grp Cap (vph)		190	2306		396	3586			173	
v/s Ratio Prot		c0.40	c0.31		c0.37	0.46			0.00	
v/s Ratio Perm										
v/c Ratio		3.34	0.61		1.47	0.58			0.02	
Uniform Delay, d1		44.0	17.4		37.5	3.7			38.8	
Progression Factor		1.25	1.96		1.00	1.00			1.00	
Incremental Delay, d2		1052.8	0.1		226.9	0.7			0.0	
Delay (s)		1107.8	34.3		264.4	4.4			38.9	
Level of Service		F	C		F	A			D	
Approach Delay (s)			367.1			61.6				
Approach LOS			F			E				
Intersection Summary										
HCM Average Control Delay			193.4						HCM Level of Service	F
HCM Volume to Capacity ratio			1.23							
Actuated Cycle Length (s)			100.0						Sum of lost time (s)	12.0
Intersection Capacity Utilization			102.3%						ICU Level of Service	G
Analysis Period (min)			15							
c	Critical Lane Group									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕↕↕		↗	↕↕↕			↕↕	↗		↕↕↕	↗
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	0.86	0.86		1.00	0.91			0.95	1.00		0.86	0.86
Frt	1.00	1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	961	3017		1118	3198			2235	1000		3035	860
Flt Permitted	0.95	0.68		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	961	2072		1118	3198			2235	1000		3035	860
Volume (vph)	719	1866	16	253	1830	53	0	1011	142	0	1709	788
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	749	1944	17	264	1906	55	0	1053	148	0	1780	821
RTOR Reduction (vph)	0	1	0	0	3	0	0	0	105	0	0	319
Lane Group Flow (vph)	538	2171	0	264	1958	0	0	1053	43	0	1780	502
Turn Type	Prot		Prot				Perm				Over	
Protected Phases	7	4		3	8			2			6	7
Permitted Phases							2					
Actuated Green, G (s)	20.9	36.4		20.9	36.4			28.4	28.4		28.4	20.9
Effective Green, g (s)	22.0	37.0		22.0	37.0			29.0	29.0		29.0	22.0
Actuated g/C Ratio	0.22	0.37		0.22	0.37			0.29	0.29		0.29	0.22
Clearance Time (s)	5.1	4.6		5.1	4.6			4.6	4.6		4.6	5.1
Vehicle Extension (s)	3.0	3.0		5.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	211	975		246	1183			648	290		880	189
v/s Ratio Prot	0.56	0.49		0.24	c0.61			0.47			c0.59	c0.58
v/s Ratio Perm	c0.33						0.04					
v/c Ratio	2.55	2.23		1.07	1.65			1.62	0.15		2.02	2.66
Uniform Delay, d1	39.0	31.5		39.0	31.5			35.5	26.3		35.5	39.0
Progression Factor	1.00	1.00		1.05	0.58			1.00	1.00		1.00	1.00
Incremental Delay, d2	711.2	555.5		40.7	295.1			288.3	1.1		464.2	760.2
Delay (s)	750.2	587.0		81.5	313.2			323.8	27.4		499.7	799.2
Level of Service	F	F		F	F			F	C		F	F
Approach Delay (s)	619.4		285.7		287.3		594.3					
Approach LOS	F		F		F		F					

Intersection Summary

HCM Average Control Delay	481.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.19		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	190.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			  	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85	1.00	0.95	
Flt Protected		0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3152		1118	3208		1118	2235	1000	1118	2133	
Flt Permitted		0.72		0.95	1.00		0.14	1.00	1.00	0.31	1.00	
Satd. Flow (perm)		2293		1118	3208		162	2235	1000	370	2133	
Volume (vph)	493	1327	75	254	1491	13	67	503	281	27	922	403
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	519	1397	79	267	1569	14	71	529	296	28	971	424
RTOR Reduction (vph)	0	4	0	0	1	0	0	0	210	0	49	0
Lane Group Flow (vph)	0	1991	0	267	1582	0	71	529	86	28	1346	0
Turn Type	Prot		Prot		Perm		Perm		Perm			
Protected Phases	7	4		3	8			2				6
Permitted Phases							2		2		6	
Actuated Green, G (s)		36.4		20.9	36.4		28.4	28.4	28.4	28.4	28.4	
Effective Green, g (s)		37.0		22.0	37.0		29.0	29.0	29.0	29.0	29.0	
Actuated g/C Ratio		0.37		0.22	0.37		0.29	0.29	0.29	0.29	0.29	
Clearance Time (s)		4.6		5.1	4.6		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)		3.0		5.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1037		246	1187		47	648	290	107	619	
v/s Ratio Prot		c0.42		0.24	c0.49			0.24			c0.63	
v/s Ratio Perm		c0.29					0.44		0.09	0.08		
v/c Ratio		1.92		1.09	1.33		1.51	0.82	0.30	0.26	2.17	
Uniform Delay, d1		31.5		39.0	31.5		35.5	33.0	27.6	27.3	35.5	
Progression Factor		0.61		0.93	1.39		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		414.1		76.7	154.7		313.0	10.9	2.6	5.9	533.9	
Delay (s)		433.2		112.8	198.4		348.5	43.9	30.2	33.1	569.4	
Level of Service		F		F	F		F	D	C	C	F	
Approach Delay (s)		433.2			186.1			63.5			558.8	
Approach LOS		F			F			E			F	
Intersection Summary												
HCM Average Control Delay			334.3			HCM Level of Service			F			
HCM Volume to Capacity ratio			1.87									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			191.8%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.86	0.97	0.88
Frbp, ped/bikes		1.00	0.97	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)		4047	968	2168	4047	2168	1760
Flt Permitted		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)		4047	968	2168	4047	2168	1760
Volume (vph)	0	1626	593	1291	2116	227	414
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1676	611	1331	2181	234	427
RTOR Reduction (vph)	0	0	48	0	0	0	306
Lane Group Flow (vph)	0	1676	563	1331	2181	234	121
Conf. Peds. (#/hr)			33	33			38
Conf. Bikes (#/hr)			14				1
Turn Type	Prot		pm+ov	Prot			Over
Protected Phases	1	6	4	3	2 3	4	3
Permitted Phases			6				
Actuated Green, G (s)		39.0	69.1	35.0	80.0	30.1	35.0
Effective Green, g (s)		41.0	74.0	34.0	79.0	33.0	34.0
Actuated g/C Ratio		0.34	0.62	0.28	0.66	0.28	0.28
Clearance Time (s)		6.0	6.9	3.0		6.9	3.0
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1383	629	614	2664	596	499
v/s Ratio Prot		c0.41	c0.25	c0.61	0.54	0.11	0.07
v/s Ratio Perm			0.34				
v/c Ratio		1.21	0.89	2.17	0.82	0.39	0.24
Uniform Delay, d1		39.5	19.7	43.0	15.2	35.4	33.1
Progression Factor		0.45	1.45	1.00	1.00	1.00	1.00
Incremental Delay, d2		98.5	7.5	530.9	2.1	0.4	0.3
Delay (s)		116.3	35.9	573.9	17.3	35.8	33.3
Level of Service		F	D	F	B	D	C
Approach Delay (s)		94.8			228.2	34.2	
Approach LOS		F			F	C	

Intersection Summary			
HCM Average Control Delay	161.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	126.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘		↖		↖	↑↑↑		↖	↑↑	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0				4.0	4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	0.88				1.00	0.91			0.95	1.00
Frt	1.00	1.00	0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1504	1504	2493				1583	4550			3167	1417
Flt Permitted	0.95	0.95	1.00				0.45	1.00			1.00	1.00
Satd. Flow (perm)	1504	1504	2493				744	4550			3167	1417
Volume (vph)	147	0	88	0	0	0	426	1182	0	0	409	545
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	167	0	100	0	0	0	484	1343	0	0	465	619
RTOR Reduction (vph)	0	0	85	0	0	0	0	0	0	0	0	490
Lane Group Flow (vph)	84	83	15	0	0	0	484	1343	0	0	465	129
Turn Type	Split		custom				pm+pt			Perm		Over
Protected Phases	4	4	7 1		3		5	2			6	4
Permitted Phases							2			6		
Actuated Green, G (s)	16.5	16.5	13.3				46.8	41.8			41.8	16.5
Effective Green, g (s)	17.1	17.1	13.9				48.0	43.0			43.0	17.1
Actuated g/C Ratio	0.19	0.19	0.15				0.53	0.48			0.48	0.19
Clearance Time (s)	4.6	4.6					4.0	5.2			5.2	4.6
Vehicle Extension (s)	3.0	3.0					3.0	3.2			3.4	3.0
Lane Grp Cap (vph)	286	286	385				443	2174			1513	269
v/s Ratio Prot	0.06	0.06	c0.01				c0.06	0.30			0.15	c0.09
v/s Ratio Perm							c0.52					
v/c Ratio	0.29	0.29	0.04				1.09	0.62			0.31	0.48
Uniform Delay, d1	31.3	31.2	32.4				20.1	17.4			14.4	32.5
Progression Factor	0.93	0.92	1.17				1.20	1.12			1.00	1.00
Incremental Delay, d2	0.8	0.8	0.0				66.1	1.1			0.5	6.0
Delay (s)	29.8	29.7	38.0				90.2	20.7			14.9	38.5
Level of Service	C	C	D				F	C			B	D
Approach Delay (s)		32.8			0.0			39.1			28.4	
Approach LOS		C			A			D			C	

Intersection Summary

HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑		↑↑	↑↑↑		↑↑	↑↑	↑↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.86		0.97	0.91		0.97	0.95	0.88
Frt		1.00	0.85		0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		4550	1417		5603		3072	4447		3072	3167	2493
Flt Permitted		1.00	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		4550	1417		5603		3072	4447		3072	3167	2493
Volume (vph)	0	2025	107	0	2974	531	448	541	96	481	492	389
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	2066	109	0	3035	542	457	552	98	491	502	397
RTOR Reduction (vph)	0	0	50	0	36	0	0	1	0	0	0	3
Lane Group Flow (vph)	0	2066	59	0	3541	0	457	649	0	491	502	394
Turn Type		pm+ov					Prot			Prot		Perm
Protected Phases		6	3		2		3	8		7	4	
Permitted Phases		6										4
Actuated Green, G (s)		35.5	47.5		35.5		12.0	27.7		12.0	27.7	27.7
Effective Green, g (s)		37.0	49.0		37.0		12.0	29.0		12.0	29.0	29.0
Actuated g/C Ratio		0.41	0.54		0.41		0.13	0.32		0.13	0.32	0.32
Clearance Time (s)		5.5	4.0		5.5		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)		4.9	3.0		5.2		3.0	5.1		3.0	5.1	5.1
Lane Grp Cap (vph)		1871	834		2303		410	1433		410	1020	803
v/s Ratio Prot		0.45	0.01		c0.63		0.15	0.15		c0.16	c0.16	
v/s Ratio Perm			0.03									0.16
v/c Ratio		1.10	0.07		1.54		1.11	0.45		1.20	0.49	0.49
Uniform Delay, d1		26.5	9.7		26.5		39.0	24.2		39.0	24.6	24.6
Progression Factor		1.00	1.00		0.33		1.00	1.00		0.97	0.80	0.79
Incremental Delay, d2		55.5	0.0		242.1		79.3	1.0		110.3	0.8	1.0
Delay (s)		82.0	9.8		251.0		118.3	25.2		148.0	20.4	20.5
Level of Service		F	A		F		F	C		F	C	C
Approach Delay (s)		78.4			251.0		63.7			65.5		
Approach LOS		E			F		E			E		

Intersection Summary			
HCM Average Control Delay	149.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	97.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	⬆	⬆⬆⬆	⬆	⬆⬆	⬆⬆⬆	⬆⬆⬆	⬆⬆
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.86	1.00	0.97	0.91	0.94	0.88
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1118	4047	1000	2168	3212	3152	1760
Flt Permitted	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1118	4047	1000	2168	3212	3152	1760
Volume (vph)	8	1699	791	319	1995	290	523
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	8	1716	799	322	2015	293	528
RTOR Reduction (vph)	0	0	492	0	0	0	411
Lane Group Flow (vph)	8	1716	307	322	2015	293	117
Conf. Peds. (#/hr)			55	55		1	202
Conf. Bikes (#/hr)			15				7
Turn Type	Prot		Over	Prot		Over	
Protected Phases	1	6	8	5	2	8	5
Permitted Phases							
Actuated Green, G (s)	1.0	45.7	30.1	26.6	70.3	30.1	26.6
Effective Green, g (s)	2.0	48.4	33.0	26.6	73.0	33.0	26.6
Actuated g/C Ratio	0.02	0.40	0.28	0.22	0.61	0.28	0.22
Clearance Time (s)	5.0	6.7	6.9	4.0	6.7	6.9	4.0
Vehicle Extension (s)	3.0	5.0	3.0	3.0	5.0	3.0	3.0
Lane Grp Cap (vph)	19	1632	275	481	1954	867	390
v/s Ratio Prot	0.01	c0.42	c0.31	0.15	c0.63	0.09	0.07
v/s Ratio Perm							
v/c Ratio	0.42	1.05	1.12	0.67	1.03	0.34	0.30
Uniform Delay, d1	58.4	35.8	43.5	42.7	23.5	34.8	38.9
Progression Factor	0.48	1.35	6.08	1.08	1.32	1.00	1.00
Incremental Delay, d2	1.4	25.0	58.2	2.1	24.6	0.2	0.4
Delay (s)	29.7	73.5	322.7	48.3	55.5	35.0	39.4
Level of Service	C	E	F	D	E	D	D
Approach Delay (s)		152.3			54.5	37.8	
Approach LOS		F			D	D	
Intersection Summary							
HCM Average Control Delay			95.6		HCM Level of Service		F
HCM Volume to Capacity ratio			1.05				
Actuated Cycle Length (s)			120.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization			102.9%		ICU Level of Service		G
Analysis Period (min)			15				
c Critical Lane Group							



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↘↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	0.97	0.91	0.91
Frbp, ped/bikes	1.00	1.00	0.95	1.00	1.00	0.90	1.00	1.00	0.90	1.00	0.93	0.93
Flpb, ped/bikes	0.99	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91	0.91
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1571	3167	1349	1559	3167	1277	3072	4550	1274	3072	3853	3853
Flt Permitted	0.28	1.00	1.00	0.32	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	463	3167	1349	530	3167	1277	3072	4550	1274	3072	3853	3853
Volume (vph)	102	735	144	250	513	60	258	1360	588	244	144	213
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	115	826	162	281	576	67	290	1528	661	274	162	239
RTOR Reduction (vph)	0	0	69	0	0	45	0	0	53	0	163	0
Lane Group Flow (vph)	115	826	93	281	576	22	290	1528	608	274	238	0
Confl. Peds. (#/hr)	92		51	51		92	89		76	76		89
Confl. Bikes (#/hr)			2						2			5
Turn Type	pm+pt		pm+ov	Perm		Perm	Prot		Perm	Prot		
Protected Phases	1	6	3		2		3	8		7	4	
Permitted Phases	6		6	2		2			8			
Actuated Green, G (s)	38.8	38.8	49.9	28.5	28.5	28.5	11.1	26.2	26.2	11.0	26.1	26.1
Effective Green, g (s)	40.3	40.3	51.4	30.0	30.0	30.0	11.1	26.7	26.7	11.0	26.6	26.6
Actuated g/C Ratio	0.45	0.45	0.57	0.33	0.33	0.33	0.12	0.30	0.30	0.12	0.30	0.30
Clearance Time (s)	3.5	5.5	4.0	5.5	5.5	5.5	4.0	4.5	4.5	4.0	4.5	4.5
Vehicle Extension (s)	3.0	4.0	2.0	4.0	4.0	4.0	2.0	3.0	3.0	2.0	3.0	3.0
Lane Grp Cap (vph)	285	1418	830	177	1056	426	379	1350	378	375	1139	1139
v/s Ratio Prot	0.03	c0.26	0.01		0.18		0.09	0.34		c0.09	0.06	0.06
v/s Ratio Perm	0.15		0.05	c0.53		0.02			c0.48			
v/c Ratio	0.40	0.58	0.11	1.59	0.55	0.05	0.77	1.13	1.61	0.73	0.21	0.21
Uniform Delay, d1	15.8	18.6	8.8	30.0	24.4	20.4	38.2	31.6	31.6	38.1	23.8	23.8
Progression Factor	1.50	1.47	4.32	1.07	1.06	1.22	1.05	0.76	0.71	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.4	0.0	266.9	0.1	0.0	5.3	65.9	281.9	6.2	0.4	0.4
Delay (s)	24.2	27.8	38.2	298.9	26.1	24.8	45.2	89.9	304.3	44.3	24.2	24.2
Level of Service	C	C	D	F	C	C	D	F	F	D	C	C
Approach Delay (s)		28.9			109.0			141.8				32.4
Approach LOS		C			F			F				C

Intersection Summary			
HCM Average Control Delay	97.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↘	↑↑↑	↗	↘	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)					4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor					1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frt					1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected					0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)					1583	1417	1583	4550	1417	1583	4550	
Flt Permitted					0.76	1.00	0.39	1.00	1.00	0.07	1.00	
Satd. Flow (perm)					1262	1417	649	4550	1417	114	4550	
Volume (vph)	0	0	0	152	0	274	2	1952	43	16	577	0
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	171	0	308	2	2193	48	18	648	0
RTOR Reduction (vph)	0	0	0	0	0	5	0	0	17	0	0	0
Lane Group Flow (vph)	0	0	0	0	171	303	2	2193	31	18	648	0
Turn Type	Perm			Perm			Perm	Perm	Perm		Perm	
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4	2		2		2	
Actuated Green, G (s)					22.4	22.4	57.6	57.6	57.6	57.6	57.6	
Effective Green, g (s)					23.4	23.4	58.6	58.6	58.6	58.6	58.6	
Actuated g/C Ratio					0.26	0.26	0.65	0.65	0.65	0.65	0.65	
Clearance Time (s)					5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)					3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)					328	368	423	2963	923	74	2963	
v/s Ratio Prot								c0.48			0.14	
v/s Ratio Perm					0.14	c0.21	0.00		0.02	0.16		
v/c Ratio					0.52	0.82	0.00	0.74	0.03	0.24	0.22	
Uniform Delay, d1					28.5	31.3	5.5	10.6	5.6	6.5	6.4	
Progression Factor					1.00	1.00	0.45	0.72	0.37	0.88	0.88	
Incremental Delay, d2					1.5	13.8	0.0	1.1	0.0	4.9	0.1	
Delay (s)					30.0	45.1	2.5	8.8	2.1	10.6	5.7	
Level of Service					C	D	A	A	A	B	A	
Approach Delay (s)		0.0			39.7			8.6			5.9	
Approach LOS		A			D			A			A	

Intersection Summary

HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕	↗	↖	↕↕↕		↖↖	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95	0.95	1.00	0.91		0.97	0.91	
Frt		0.92			0.94	0.85	1.00	0.99		1.00	0.97	
Flt Protected		0.98			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2855			1456	1346	1583	4503		3072	4406	
Flt Permitted		0.88			0.85	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2544			1268	1346	1583	4503		3072	4406	
Volume (vph)	5	2	9	92	36	419	57	1535	113	39	560	150
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	6	2	10	105	41	476	65	1744	128	44	636	170
RTOR Reduction (vph)	0	8	0	0	32	1	0	7	0	0	40	0
Lane Group Flow (vph)	0	10	0	0	213	376	65	1865	0	44	766	0
Turn Type	Perm		Perm		pm+ov		Prot		Prot			
Protected Phases	8		4		4	5	1	6	5		2	
Permitted Phases	8		4		4							
Actuated Green, G (s)	19.3				19.3	27.5	7.9	48.3	8.2		48.6	
Effective Green, g (s)	20.8				20.8	29.0	7.9	49.0	8.2		49.3	
Actuated g/C Ratio	0.23				0.23	0.32	0.09	0.54	0.09		0.55	
Clearance Time (s)	5.5				5.5	4.0	4.0	4.7	4.0		4.7	
Vehicle Extension (s)	3.0				3.0	3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	588				293	494	139	2452	280		2414	
v/s Ratio Prot					c0.07		0.04	c0.41	0.01		0.17	
v/s Ratio Perm	0.00				0.17	0.21						
v/c Ratio	0.02				0.73	0.76	0.47	0.76	0.16		0.32	
Uniform Delay, d1	26.7				32.0	27.4	39.0	15.9	37.7		11.1	
Progression Factor	1.00				1.00	1.00	1.38	0.27	0.81		1.63	
Incremental Delay, d2	0.0				8.7	6.8	1.2	1.1	0.3		0.3	
Delay (s)	26.7				40.7	34.2	55.2	5.4	30.9		18.4	
Level of Service	C				D	C	E	A	C		B	
Approach Delay (s)	26.7				36.8		7.0				19.1	
Approach LOS	C				D		A				B	

Intersection Summary

HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔		↔	↔		↔	↔↔	↔↔↔		↔	↔↔↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97		1.00	1.00		1.00	0.97	0.91		1.00	0.91	
Frt	1.00		0.85	1.00		0.85	1.00	1.00		1.00	0.95	
Flt Protected	0.95		1.00	0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3072		1417	1583		1417	3072	4534		1583	4312	
Flt Permitted	0.95		1.00	0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3072		1417	1583		1417	3072	4534		1583	4312	
Volume (vph)	14	0	12	27	0	103	210	1613	38	14	426	228
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	17	0	15	33	0	127	259	1991	47	17	526	281
RTOR Reduction (vph)	0	0	13	0	0	83	0	2	0	0	95	0
Lane Group Flow (vph)	17	0	2	33	0	44	259	2036	0	17	712	0
Turn Type	Prot		custom	Prot		custom	Prot			Prot		
Protected Phases	3		3 5	4		1 4	5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	3.8		13.8	20.3		31.8	10.0	41.4		6.6	38.0	
Effective Green, g (s)	4.7		13.9	21.2		31.0	9.2	42.3		5.8	38.9	
Actuated g/C Ratio	0.05		0.15	0.24		0.34	0.10	0.47		0.06	0.43	
Clearance Time (s)	4.9			4.9			3.2	4.9		3.2	4.9	
Vehicle Extension (s)	3.0			3.0			3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	160		219	373		488	314	2131		102	1864	
v/s Ratio Prot	c0.01		0.00	0.02		c0.03	c0.08	c0.45		0.01	0.17	
v/s Ratio Perm												
v/c Ratio	0.11		0.01	0.09		0.09	0.82	0.96		0.17	0.38	
Uniform Delay, d1	40.6		32.2	26.9		20.0	39.6	22.9		39.8	17.4	
Progression Factor	1.00		1.00	1.00		1.00	1.47	0.56		1.26	0.54	
Incremental Delay, d2	0.3		0.0	0.1		0.1	1.7	1.5		0.7	0.6	
Delay (s)	40.9		32.2	27.0		20.0	59.7	14.5		50.7	10.0	
Level of Service	D		C	C		C	E	B		D	A	
Approach Delay (s)		36.9			21.5			19.6			10.8	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.91	0.91		0.97	0.88
Frt	1.00	1.00	0.96		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3072	4550	4377		3072	2493
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3072	4550	4377		3072	2493
Volume (vph)	1331	1741	1595	541	106	231
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1479	1934	1772	601	118	257
RTOR Reduction (vph)	0	0	61	0	0	186
Lane Group Flow (vph)	1479	1934	2312	0	118	71
Turn Type	Prot					Prot
Protected Phases	5	2 5	6		4	4
Permitted Phases						
Actuated Green, G (s)	12.0	55.5	38.5		24.0	24.0
Effective Green, g (s)	13.0	57.0	40.0		25.0	25.0
Actuated g/C Ratio	0.14	0.63	0.44		0.28	0.28
Clearance Time (s)	5.0		5.5		5.0	5.0
Vehicle Extension (s)	2.0		3.0		3.0	3.0
Lane Grp Cap (vph)	444	2882	1945		853	693
v/s Ratio Prot	c0.48	0.43	c0.53		c0.04	0.03
v/s Ratio Perm						
v/c Ratio	3.33	0.67	1.19		0.14	0.10
Uniform Delay, d1	38.5	10.5	25.0		24.4	24.2
Progression Factor	1.00	1.00	1.00		1.38	3.87
Incremental Delay, d2	1054.7	1.3	90.5		0.1	0.1
Delay (s)	1093.2	11.8	115.5		33.8	93.6
Level of Service	F	B	F		C	F
Approach Delay (s)		480.4	115.5		74.8	
Approach LOS		F	F		E	

Intersection Summary

HCM Average Control Delay	315.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↓	↑↑↑	↑↓	↑
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	0.97	0.91
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3212	1000	2168	3212	2168	910
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3212	1000	2168	3212	2168	910
Volume (vph)	2484	876	247	1990	368	114
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	2535	894	252	2031	376	116
RTOR Reduction (vph)	0	317	0	0	0	87
Lane Group Flow (vph)	2535	577	252	2031	376	29
Confl. Peds. (#/hr)		59	59		11	
Confl. Bikes (#/hr)		14				
Turn Type		Over	Prot			Perm
Protected Phases	6	4	5	2	4	
Permitted Phases						4
Actuated Green, G (s)	59.6	28.1	17.2	80.8	28.1	28.1
Effective Green, g (s)	60.8	30.0	17.2	82.0	30.0	30.0
Actuated g/C Ratio	0.51	0.25	0.14	0.68	0.25	0.25
Clearance Time (s)	5.2	5.9	4.0	5.2	5.9	5.9
Vehicle Extension (s)	3.7	3.8	1.0	3.5	3.8	3.8
Lane Grp Cap (vph)	1627	250	311	2195	542	228
v/s Ratio Prot	c0.79	c0.58	0.12	c0.63	0.17	
v/s Ratio Perm						0.03
v/c Ratio	1.56	2.31	0.81	0.93	0.69	0.13
Uniform Delay, d1	29.6	45.0	49.8	16.4	40.8	34.9
Progression Factor	1.62	1.57	1.27	0.54	1.00	1.00
Incremental Delay, d2	251.4	589.3	6.4	3.9	7.2	1.1
Delay (s)	299.3	659.7	69.7	12.7	48.0	36.0
Level of Service	F	F	E	B	D	D
Approach Delay (s)	393.3			19.0	45.2	
Approach LOS	F			B	D	

Intersection Summary			
HCM Average Control Delay	227.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	115.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↘	↙↘	↕↕	↙	↘	↕↕↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.88	0.95	1.00	1.00	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3072	2493	3167	1417	1583	4550
Flt Permitted	0.95	1.00	1.00	1.00	0.52	1.00
Satd. Flow (perm)	3072	2493	3167	1417	867	4550
Volume (vph)	68	327	289	431	690	303
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	363	321	479	767	337
RTOR Reduction (vph)	0	312	0	12	0	0
Lane Group Flow (vph)	76	51	321	467	767	337
Turn Type		Perm		pm+ov	pm+pt	
Protected Phases	4		2	4	1	6
Permitted Phases		4		2	6	
Actuated Green, G (s)	12.1	12.1	54.9	67.0	67.9	67.9
Effective Green, g (s)	12.6	12.6	56.4	69.0	69.4	69.4
Actuated g/C Ratio	0.14	0.14	0.63	0.77	0.77	0.77
Clearance Time (s)	4.5	4.5	5.5	4.5	3.0	5.5
Vehicle Extension (s)	3.0	3.0	5.0	3.0	3.0	5.0
Lane Grp Cap (vph)	430	349	1985	1149	740	3509
v/s Ratio Prot	0.02		0.10	c0.06	c0.10	0.07
v/s Ratio Perm		0.02		0.27	c0.70	
v/c Ratio	0.18	0.15	0.16	0.41	1.04	0.10
Uniform Delay, d1	34.1	34.0	7.0	3.6	8.9	2.5
Progression Factor	0.71	2.11	0.11	2.78	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.0	0.0	42.9	0.1
Delay (s)	24.5	71.9	0.8	9.9	51.8	2.6
Level of Service	C	E	A	A	D	A
Approach Delay (s)	63.7		6.3			36.8
Approach LOS	E		A			D

Intersection Summary





























HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↗	↑↑↑	↑↑↑	↖	↖↗	↖↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.91	1.00	0.97	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3072	4550	4550	1417	3072	2493
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3072	4550	4550	1417	3072	2493
Volume (vph)	1158	3078	2101	209	22	120
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1194	3173	2166	215	23	124
RTOR Reduction (vph)	0	0	0	112	0	0
Lane Group Flow (vph)	1194	3173	2166	103	23	124
Turn Type	Prot			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)	15.0	55.1	36.1	36.1	25.0	25.0
Effective Green, g (s)	15.0	56.3	37.3	37.3	25.7	25.7
Actuated g/C Ratio	0.17	0.63	0.41	0.41	0.29	0.29
Clearance Time (s)	4.0	5.2	5.2	5.2	4.7	4.7
Vehicle Extension (s)	3.0	4.8	4.6	4.6	3.0	3.0
Lane Grp Cap (vph)	512	2846	1886	587	877	712
v/s Ratio Prot	c0.39	c0.70	0.48		0.01	
v/s Ratio Perm				0.07		c0.05
v/c Ratio	2.33	1.11	1.15	0.17	0.03	0.17
Uniform Delay, d1	37.5	16.9	26.4	16.6	23.1	24.2
Progression Factor	1.56	0.77	1.00	1.00	0.90	0.92
Incremental Delay, d2	600.0	52.3	73.5	0.6	0.0	0.1
Delay (s)	658.3	65.3	99.9	17.3	20.8	22.4
Level of Service	F	E	F	B	C	C
Approach Delay (s)		227.4	92.4		22.1	
Approach LOS		F	F		C	

Intersection Summary

HCM Average Control Delay	176.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4550	1417	1583	4524		1583	3106		1583	3083	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.13	1.00		0.15	1.00	
Satd. Flow (perm)	1583	4550	1417	1583	4524		215	3106		247	3083	
Volume (vph)	140	2270	411	116	2698	105	177	967	143	119	986	211
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	141	2293	415	117	2725	106	179	977	144	120	996	213
RTOR Reduction (vph)	0	0	156	0	3	0	0	10	0	0	15	0
Lane Group Flow (vph)	141	2293	259	117	2828	0	179	1111	0	120	1194	0
Turn Type	Prot		Perm	Prot			pm+pt			Perm		
Protected Phases	1	6		5	2		3	8			4	
Permitted Phases			6				8			4		
Actuated Green, G (s)	13.4	53.8	53.8	12.2	52.6		40.0	40.0		26.0	26.0	
Effective Green, g (s)	13.4	54.8	54.8	12.2	53.6		41.0	41.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.46	0.46	0.10	0.45		0.34	0.34		0.22	0.22	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		3.5	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	177	2078	647	161	2021		187	1061		56	694	
v/s Ratio Prot	c0.09	0.50		0.07	c0.62		0.08	c0.36			0.39	
v/s Ratio Perm			0.18				0.25			c0.49		
v/c Ratio	0.80	1.10	0.40	0.73	1.40		0.96	1.05		2.14	1.72	
Uniform Delay, d1	52.0	32.6	21.7	52.3	33.2		56.8	39.5		46.5	46.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.50	1.41		1.00	1.00	
Incremental Delay, d2	20.2	54.5	1.8	12.9	182.7		11.3	24.2		568.8	330.5	
Delay (s)	72.2	87.1	23.5	65.2	215.9		96.3	80.1		615.3	377.0	
Level of Service	E	F	C	E	F		F	F		F	F	
Approach Delay (s)		77.1			209.9			82.3			398.5	
Approach LOS		E			F			F			F	
Intersection Summary												
HCM Average Control Delay			175.1			HCM Level of Service				F		
HCM Volume to Capacity ratio			1.50									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)		16.0				
Intersection Capacity Utilization			131.8%			ICU Level of Service		H				
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕↕↕	↖	↖↗	↕↕↕	↖	↖↗	↕↕	↖	↖↗	↕↕	↖
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3212	1000	2168	3212	1000	2168	2235	1000	2168	2235	1000
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2168	3212	1000	2168	3212	1000	2168	2235	1000	2168	2235	1000
Volume (vph)	70	2390	197	48	2034	249	100	1032	167	727	1220	121
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	71	2439	201	49	2076	254	102	1053	170	742	1245	123
RTOR Reduction (vph)	0	0	73	0	0	35	0	0	101	0	0	60
Lane Group Flow (vph)	71	2439	128	49	2076	219	102	1053	69	742	1245	63
Turn Type	Prot		Perm	Prot		pm+ov	Prot		Perm	Prot		Perm
Protected Phases	1	6		5	2	7	3	8		7	4	
Permitted Phases			6			2			8			4
Actuated Green, G (s)	6.2	29.7	29.7	8.8	32.3	54.3	9.6	39.6	39.6	22.0	52.0	52.0
Effective Green, g (s)	6.2	31.2	31.2	8.8	33.8	55.8	9.6	42.0	42.0	22.0	54.4	54.4
Actuated g/C Ratio	0.05	0.26	0.26	0.07	0.28	0.46	0.08	0.35	0.35	0.18	0.45	0.45
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5	4.0	4.0	6.4	6.4	4.0	6.4	6.4
Vehicle Extension (s)	2.0	4.5	4.5	2.0	5.2	2.0	2.0	4.7	4.7	2.0	4.7	4.7
Lane Grp Cap (vph)	112	835	260	159	905	465	173	782	350	397	1013	453
v/s Ratio Prot	0.03	c0.76		0.02	c0.65	0.09	0.05	c0.47		c0.34	0.56	
v/s Ratio Perm			0.13			0.13			0.07			0.06
v/c Ratio	0.63	2.92	0.49	0.31	2.29	0.47	0.59	1.35	0.20	1.87	1.23	0.14
Uniform Delay, d1	55.8	44.4	37.7	52.7	43.1	22.0	53.3	39.0	27.2	49.0	32.8	19.1
Progression Factor	1.21	1.62	2.50	0.91	0.93	0.68	1.00	1.00	1.00	0.78	0.66	0.12
Incremental Delay, d2	0.8	864.7	0.6	0.2	583.8	0.1	3.3	164.4	0.5	394.2	106.1	0.1
Delay (s)	68.3	936.6	94.8	48.1	624.1	15.1	56.6	203.4	27.7	432.2	127.7	2.3
Level of Service	E	F	F	D	F	B	E	F	C	F	F	A
Approach Delay (s)		851.4			547.2			169.6			227.5	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	506.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	161.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.86		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	5732		1583	3167	1417	1583	3167	1417
Flt Permitted	0.12	1.00	1.00	0.12	1.00		0.26	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	197	4550	1417	202	5732		431	3167	1417	215	3167	1417
Volume (vph)	286	3391	78	32	2443	5	55	958	231	320	918	303
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	289	3425	79	32	2468	5	56	968	233	323	927	306
RTOR Reduction (vph)	0	0	27	0	0	0	0	0	4	0	0	0
Lane Group Flow (vph)	289	3425	52	32	2473	0	56	968	229	323	927	306
Turn Type	pm+pt		Perm	pm+pt		Perm		pm+ov	pm+pt		pm+ov	
Protected Phases	1	6		5	2			8	5	7	4	1
Permitted Phases	6		6	2		8	8	8	4			4
Actuated Green, G (s)	40.3	33.3	33.3	38.7	32.5	25.5	25.5	31.7	36.5	36.5	43.5	
Effective Green, g (s)	40.8	33.8	33.8	39.2	33.0	27.0	27.0	33.2	38.0	38.0	45.0	
Actuated g/C Ratio	0.45	0.38	0.38	0.44	0.37	0.30	0.30	0.37	0.42	0.42	0.50	
Clearance Time (s)	4.0	4.5	4.5	4.0	4.5	5.5	5.5	4.0	4.0	5.5	4.0	
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	5.0	3.0	3.0	5.0	3.0	
Lane Grp Cap (vph)	197	1709	532	183	2102	129	950	586	197	1337	771	
v/s Ratio Prot	c0.11	c0.75		0.01	0.43		0.31	0.03	c0.13	0.29	0.03	
v/s Ratio Perm	0.55		0.04	0.06		0.13		0.13	c0.56		0.19	
v/c Ratio	1.47	2.00	0.10	0.17	1.18	0.43	1.02	0.39	1.64	0.69	0.40	
Uniform Delay, d1	43.7	28.1	18.2	20.7	28.5	25.4	31.5	20.9	22.3	21.2	14.0	
Progression Factor	1.56	0.65	0.19	0.31	0.31	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	212.7	452.0	0.0	0.0	79.9	4.8	34.0	0.4	309.6	2.0	0.3	
Delay (s)	281.0	470.3	3.5	6.4	88.9	30.2	65.5	21.4	331.9	23.2	14.4	
Level of Service	F	F	A	A	F	C	E	C	F	C	B	
Approach Delay (s)		446.1			87.8		55.8				85.6	
Approach LOS		F			F		E				F	

Intersection Summary

HCM Average Control Delay	232.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.68		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	140.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1583	3068		1583	3158		1504	1581	1417		1582	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (perm)	1583	3068		1583	3158		1504	1581	1417		1582	
Volume (vph)	22	1006	264	701	1244	24	181	177	135	35	91	56
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	1118	293	779	1382	27	201	197	150	39	101	62
RTOR Reduction (vph)	0	19	0	0	1	0	0	0	92	0	0	0
Lane Group Flow (vph)	24	1392	0	779	1408	0	194	204	58	0	202	0
Turn Type	Prot		Prot		Split		pm+ov		Split			
Protected Phases	1	6		5	2		3	3	5		4	4
Permitted Phases									3			
Actuated Green, G (s)	3.6	36.1		36.2	68.7		10.0	10.0	46.2		20.0	
Effective Green, g (s)	2.6	36.9		35.2	69.5		10.9	10.9	46.1		21.0	
Actuated g/C Ratio	0.02	0.31		0.29	0.58		0.09	0.09	0.38		0.18	
Clearance Time (s)	3.0	4.8		3.0	4.8		4.9	4.9	3.0		5.0	
Vehicle Extension (s)	3.0	6.0		3.0	6.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	34	943		464	1829		137	144	592		277	
v/s Ratio Prot	0.02	c0.45		c0.49	0.45		0.13	c0.13	0.03		c0.13	
v/s Ratio Perm									0.01			
v/c Ratio	0.71	1.48		1.68	0.77		1.42	1.42	0.10		0.73	
Uniform Delay, d1	58.3	41.5		42.4	19.2		54.5	54.5	23.6		46.8	
Progression Factor	0.81	0.87		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	5.9	214.6		314.8	3.2		224.5	223.2	0.1		9.2	
Delay (s)	53.4	250.7		357.2	22.4		279.1	277.8	23.7		56.1	
Level of Service	D	F		F	C		F	F	C		E	
Approach Delay (s)		247.4			141.6			208.7			56.1	
Approach LOS		F			F			F			E	

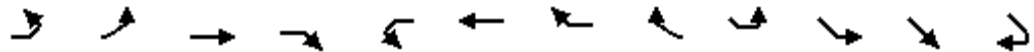
Intersection Summary

HCM Average Control Delay	180.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	119.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖		↖	↖		↖	↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.90		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1504	1513	1417	1583	1497		1583	1658		1583	1667	1417
Flt Permitted	0.72	0.70	1.00	0.95	1.00		0.23	1.00		0.24	1.00	1.00
Satd. Flow (perm)	1138	1105	1417	1583	1497		378	1658		408	1667	1417
Volume (vph)	261	10	36	17	19	39	80	546	21	56	586	285
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	266	10	37	17	19	40	82	557	21	57	598	291
RTOR Reduction (vph)	0	0	32	0	30	0	0	2	0	0	0	159
Lane Group Flow (vph)	133	143	5	17	29	0	82	576	0	57	598	132
Turn Type	Perm		Perm	Split			Perm			Perm		Perm
Protected Phases		4		3	3			2			2	
Permitted Phases	4		4				2			2		2
Actuated Green, G (s)	10.0	10.0	10.0	17.0	17.0		32.6	32.6		32.6	32.6	32.6
Effective Green, g (s)	11.0	11.0	11.0	18.0	18.0		34.0	34.0		34.0	34.0	34.0
Actuated g/C Ratio	0.15	0.15	0.15	0.24	0.24		0.45	0.45		0.45	0.45	0.45
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.4	5.4		5.4	5.4	5.4
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	167	162	208	380	359		171	752		185	756	642
v/s Ratio Prot				0.01	c0.02			0.35			c0.36	
v/s Ratio Perm	0.12	c0.13	0.00				0.22			0.14		0.09
v/c Ratio	0.80	0.88	0.03	0.04	0.08		0.48	0.77		0.31	0.79	0.21
Uniform Delay, d1	30.9	31.4	27.4	21.9	22.1		14.3	17.2		13.0	17.5	12.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	22.5	38.9	0.1	0.2	0.4		9.3	7.3		4.3	8.3	0.7
Delay (s)	53.5	70.3	27.5	22.1	22.5		23.6	24.5		17.3	25.8	13.1
Level of Service	D	E	C	C	C		C	C		B	C	B
Approach Delay (s)		58.1			22.4			24.4			21.3	
Approach LOS		E			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	SEL2	SEL	SET	SER
Lane Configurations			↕	↗		↕↗				↘	↕↗	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1700	1700	1700	1700	1700
Total Lost time (s)			4.0	4.0		4.0				4.0	4.0	
Lane Util. Factor			1.00	1.00		0.95				1.00	0.95	
Frt			1.00	0.85		0.99				1.00	0.99	
Flt Protected			0.99	1.00		0.98				0.95	1.00	
Satd. Flow (prot)			1165	1000		2160				1583	3131	
Flt Permitted			0.79	1.00		0.65				0.45	1.00	
Satd. Flow (perm)			924	1000		1428				756	3131	
Volume (vph)	19	46	277	10	305	342	40	20	4	34	289	23
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	20	47	286	10	314	353	41	21	4	35	298	24
RTOR Reduction (vph)	0	0	0	5	0	3	0	0	0	0	8	0
Lane Group Flow (vph)	0	0	353	5	0	726	0	0	0	39	314	0
Turn Type		Perm		Perm	Perm				Perm	Perm		
Protected Phases			6			2					4	
Permitted Phases		6		6	2				4	4		
Actuated Green, G (s)			34.0	34.0		34.0				30.0	30.0	
Effective Green, g (s)			36.0	36.0		36.0				31.0	31.0	
Actuated g/C Ratio			0.48	0.48		0.48				0.41	0.41	
Clearance Time (s)			6.0	6.0		6.0				5.0	5.0	
Vehicle Extension (s)			3.0	3.0		3.0				3.0	3.0	
Lane Grp Cap (vph)			444	480		685				312	1294	
v/s Ratio Prot											0.10	
v/s Ratio Perm			0.38	0.00		c0.51				0.05		
v/c Ratio			0.80	0.01		1.18dl				0.12	0.24	
Uniform Delay, d1			16.4	10.2		19.5				13.6	14.3	
Progression Factor			1.05	1.36		1.00				1.00	1.00	
Incremental Delay, d2			11.0	0.0		51.5				0.8	0.4	
Delay (s)			28.3	13.9		71.0				14.4	14.8	
Level of Service			C	B		E				B	B	
Approach Delay (s)			27.9			71.0					14.8	
Approach LOS			C			E					B	

Intersection Summary

HCM Average Control Delay	33.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	119.7%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	NWL	NWT	NWR	NWR2
Lane Configurations				
Ideal Flow (vphpl)	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	
Satd. Flow (prot)	1583	1667	1417	
Flt Permitted	0.55	1.00	1.00	
Satd. Flow (perm)	911	1667	1417	
Volume (vph)	132	321	173	365
Peak-hour factor, PHF	0.97	0.97	0.97	0.97
Adj. Flow (vph)	136	331	178	376
RTOR Reduction (vph)	0	0	101	0
Lane Group Flow (vph)	136	331	453	0
Turn Type	Perm		Perm	
Protected Phases		8		
Permitted Phases	8		8	
Actuated Green, G (s)	30.0	30.0	30.0	
Effective Green, g (s)	31.0	31.0	31.0	
Actuated g/C Ratio	0.41	0.41	0.41	
Clearance Time (s)	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	
Lane Grp Cap (vph)	377	689	586	
v/s Ratio Prot		0.20		
v/s Ratio Perm	0.15		0.32	
v/c Ratio	0.36	0.48	0.77	
Uniform Delay, d1	15.2	16.1	19.0	
Progression Factor	0.86	0.85	0.92	
Incremental Delay, d2	0.2	0.2	0.9	
Delay (s)	13.3	13.9	18.4	
Level of Service	B	B	B	
Approach Delay (s)		16.2		
Approach LOS		B		
Intersection Summary				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		1.00	0.86			1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.98			0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	1.00
Satd. Flow (prot)	2168	3971		1118	3956			1153		1118	1176	1000
Flt Permitted	0.95	1.00		0.05	1.00			0.93		0.16	1.00	1.00
Satd. Flow (perm)	2168	3971		54	3956			1075		186	1176	1000
Volume (vph)	177	2391	342	95	2585	454	9	320	53	69	283	252
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	179	2415	345	96	2611	459	9	323	54	70	286	255
RTOR Reduction (vph)	0	17	0	0	14	0	0	4	0	0	0	0
Lane Group Flow (vph)	179	2743	0	96	3056	0	0	382	0	70	286	255
Turn Type	Prot		Perm			Perm		Perm		Perm		pm+ov
Protected Phases	5	2			6			4			4	5
Permitted Phases				6			4			4		4
Actuated Green, G (s)	17.1	109.0		87.9	87.9			32.0		32.0	32.0	49.1
Effective Green, g (s)	17.1	109.0		87.9	87.9			33.0		33.0	33.0	50.1
Actuated g/C Ratio	0.11	0.73		0.59	0.59			0.22		0.22	0.22	0.33
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0		5.0	5.0	4.0
Vehicle Extension (s)	1.5	4.0		4.0	4.0			3.0		3.0	3.0	1.5
Lane Grp Cap (vph)	247	2886		32	2318			237		41	259	361
v/s Ratio Prot	0.08	c0.69			0.77						0.24	0.08
v/s Ratio Perm				c1.79				0.36		c0.38		0.17
v/c Ratio	0.72	0.95		3.00	1.32			1.61		1.71	1.10	0.71
Uniform Delay, d1	64.2	18.1		31.0	31.0			58.5		58.5	58.5	43.5
Progression Factor	1.40	0.55		1.00	1.00			1.00		1.07	1.07	0.94
Incremental Delay, d2	0.8	1.0		977.7	146.5			294.2		384.3	79.5	3.9
Delay (s)	90.7	10.9		1008.7	177.5			352.7		447.0	142.2	44.7
Level of Service	F	B		F	F			F		F	F	D
Approach Delay (s)		15.8			202.7			352.7			136.4	
Approach LOS		B			F			F			F	

Intersection Summary

HCM Average Control Delay	127.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.47		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	148.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕	↗	↖	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00	0.57	1.00	1.00	0.88
Flpb, ped/bikes	0.96	1.00		0.99	1.00		0.94	1.00	1.00	0.76	1.00	1.00
Frt	1.00	0.95		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1519	1556		1570	1650		1496	3167	801	1199	3167	1248
Flt Permitted	0.62	1.00		0.44	1.00		0.44	1.00	1.00	0.42	1.00	1.00
Satd. Flow (perm)	993	1556		734	1650		700	3167	801	527	3167	1248
Volume (vph)	99	177	90	173	206	10	45	467	147	39	431	60
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	101	181	92	177	210	10	46	477	150	40	440	61
RTOR Reduction (vph)	0	25	0	0	2	0	0	0	82	0	0	38
Lane Group Flow (vph)	101	248	0	177	218	0	46	477	68	40	440	23
Conf. Peds. (#/hr)	66		43	43		66	111		339	339		111
Conf. Bikes (#/hr)			4			6			18			1
Turn Type	Perm			pm+pt			Perm		pm+ov	Perm		Perm
Protected Phases		6		5	2			8	5		4	
Permitted Phases	6			2			8	8	4			4
Actuated Green, G (s)	27.6	27.6		37.6	37.6		27.0	27.0	33.5	27.0	27.0	27.0
Effective Green, g (s)	29.0	29.0		39.0	39.0		28.0	28.0	34.0	28.0	28.0	28.0
Actuated g/C Ratio	0.39	0.39		0.52	0.52		0.37	0.37	0.45	0.37	0.37	0.37
Clearance Time (s)	5.4	5.4		3.5	5.4		5.0	5.0	3.5	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	384	602		449	858		261	1182	406	197	1182	466
v/s Ratio Prot		0.16		c0.03	0.13			c0.15	0.01		0.14	
v/s Ratio Perm	0.10			c0.17			0.07		0.07	0.08		0.02
v/c Ratio	0.26	0.41		0.39	0.25		0.18	0.40	0.17	0.20	0.37	0.05
Uniform Delay, d1	15.7	16.8		10.3	10.0		15.8	17.3	12.1	15.9	17.1	15.0
Progression Factor	1.11	1.14		1.00	1.00		1.81	1.83	4.73	1.00	1.00	1.00
Incremental Delay, d2	1.6	2.0		0.6	0.7		1.3	0.9	0.2	2.3	0.9	0.2
Delay (s)	19.0	21.2		10.9	10.7		29.8	32.7	57.5	18.2	18.0	15.2
Level of Service	B	C		B	B		C	C	E	B	B	B
Approach Delay (s)		20.6			10.8			38.0			17.7	
Approach LOS		C			B			D			B	

Intersection Summary			
HCM Average Control Delay	23.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↕			↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	1.00
Frbp, ped/bikes		1.00	1.00		0.96		1.00	0.95			1.00	0.30
Flpb, ped/bikes		0.93	1.00		0.92		0.81	1.00			0.95	1.00
Frt		1.00	0.85		0.98		1.00	0.99			1.00	0.85
Flt Protected		0.99	1.00		0.99		0.95	1.00			0.99	1.00
Satd. Flow (prot)		1525	1417		1438		1288	2967			2960	420
Flt Permitted		0.87	1.00		0.93		0.27	1.00			0.60	1.00
Satd. Flow (perm)		1345	1417		1348		369	2967			1802	420
Volume (vph)	58	137	32	31	125	21	102	622	50	186	549	21
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	62	147	34	33	134	23	110	669	54	200	590	23
RTOR Reduction (vph)	0	0	34	0	1	0	0	3	0	0	0	8
Lane Group Flow (vph)	0	209	0	0	189	0	110	720	0	0	790	15
Confl. Peds. (#/hr)	570		715	715		570	814		795	795		814
Confl. Bikes (#/hr)			9			12			43			28
Turn Type	Perm		NA	Perm			Perm			Perm		Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		2
Actuated Green, G (s)		30.5	0.0		30.5		34.1	34.1			34.1	34.1
Effective Green, g (s)		32.0	0.0		32.0		35.0	35.0			35.0	35.0
Actuated g/C Ratio		0.43	0.00		0.43		0.47	0.47			0.47	0.47
Clearance Time (s)		5.5			5.5		4.9	4.9			4.9	4.9
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		574	0		575		172	1385			841	196
v/s Ratio Prot								0.24				
v/s Ratio Perm		c0.16			0.14		0.30				c0.44	0.04
v/c Ratio		0.36	0.00		0.33		0.64	0.52			1.07dl	0.08
Uniform Delay, d1		14.6	37.5		14.3		15.2	14.1			19.0	11.1
Progression Factor		1.00	1.00		1.00		1.00	1.00			0.95	0.85
Incremental Delay, d2		1.8	0.0		1.5		16.8	1.4			18.8	0.7
Delay (s)		16.4	37.5		15.9		32.0	15.5			36.8	10.1
Level of Service		B	D		B		C	B			D	B
Approach Delay (s)		19.3			15.9			17.7			36.1	
Approach LOS		B			B			B			D	

Intersection Summary

HCM Average Control Delay	24.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.1%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕	↗		↕↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor		0.95			0.95			0.95	1.00		0.95	
Frbp, ped/bikes		0.85			0.98			1.00	0.67		0.98	
Flpb, ped/bikes		0.99			0.93			1.00	1.00		1.00	
Frt		0.93			0.99			1.00	0.85		0.99	
Flt Protected		1.00			0.98			1.00	1.00		1.00	
Satd. Flow (prot)		1730			1971			2235	668		2185	
Flt Permitted		0.90			0.63			1.00	1.00		0.93	
Satd. Flow (perm)		1558			1278			2235	668		2039	
Volume (vph)	24	174	195	227	255	33	0	936	278	9	442	20
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	24	178	199	232	260	34	0	955	284	9	451	20
RTOR Reduction (vph)	0	26	0	0	3	0	0	0	100	0	2	0
Lane Group Flow (vph)	0	375	0	0	523	0	0	955	184	0	478	0
Conf. Peds. (#/hr)	138		216	216		138	330		211	211		330
Conf. Bikes (#/hr)			2			2			16			3
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		
Actuated Green, G (s)		68.5			68.5			71.0	71.0			71.0
Effective Green, g (s)		70.0			70.0			72.0	72.0			72.0
Actuated g/C Ratio		0.47			0.47			0.48	0.48			0.48
Clearance Time (s)		5.5			5.5			5.0	5.0			5.0
Vehicle Extension (s)		3.0			3.0			3.0	3.0			3.0
Lane Grp Cap (vph)		727			596			1073	321			979
v/s Ratio Prot								c0.43				
v/s Ratio Perm		0.24			c0.41				0.28			0.23
v/c Ratio		0.52			1.05dl			0.89	0.57			0.49
Uniform Delay, d1		28.1			36.1			35.4	28.0			26.5
Progression Factor		0.73			1.19			1.55	2.86			1.00
Incremental Delay, d2		0.2			10.0			1.2	0.7			1.7
Delay (s)		20.8			53.2			56.2	80.6			28.2
Level of Service		C			D			E	F			C
Approach Delay (s)		20.8			53.2			61.8				28.2
Approach LOS		C			D			E				C

Intersection Summary

HCM Average Control Delay	47.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑		↔↔	↑↑↑		↔	↑↑↑		↔	↑↑↑	↔
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		0.97	0.86		1.00	0.91		1.00	0.86	0.86
Frbp, ped/bikes	1.00	0.95		1.00	0.99		1.00	0.93		1.00	0.99	0.85
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		0.91	1.00	1.00
Frt	1.00	0.97		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	2168	3738		2168	3959		1096	2869		1021	2995	730
Flt Permitted	0.95	1.00		0.95	1.00		0.23	1.00		0.27	1.00	1.00
Satd. Flow (perm)	2168	3738		2168	3959		265	2869		292	2995	730
Volume (vph)	427	2745	576	263	2486	122	427	635	191	56	516	279
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	449	2889	606	277	2617	128	449	668	201	59	543	294
RTOR Reduction (vph)	0	25	0	0	4	0	0	37	0	0	2	1
Lane Group Flow (vph)	449	3470	0	277	2741	0	449	832	0	59	557	277
Conf. Peds. (#/hr)	220		162	162		220	210		239	239		210
Conf. Bikes (#/hr)			3			2			13			5
Turn Type	Prot			Prot			pm+pt			Perm		pm+ov
Protected Phases	5	2		1	6		3	8			4	5
Permitted Phases							8			4		4
Actuated Green, G (s)	33.2	77.5		13.1	57.4		44.0	44.0		30.0	30.0	63.2
Effective Green, g (s)	33.2	79.0		13.1	58.9		45.9	45.9		31.9	31.9	65.1
Actuated g/C Ratio	0.22	0.53		0.09	0.39		0.31	0.31		0.21	0.21	0.43
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	5.9		5.9	5.9	4.0
Vehicle Extension (s)	2.0	4.0		2.0	4.0		3.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	480	1969		189	1555		136	878		62	637	336
v/s Ratio Prot	0.21	c0.93		0.13	c0.69		c0.22	0.29			0.19	0.18
v/s Ratio Perm							c0.79			0.20		0.20
v/c Ratio	0.94	1.76		1.47	1.76		3.30	0.95		0.95	0.88	0.83
Uniform Delay, d1	57.3	35.5		68.5	45.5		48.4	50.9		58.3	57.1	37.4
Progression Factor	1.34	1.08		0.82	0.73		1.00	1.00		1.03	1.03	1.19
Incremental Delay, d2	3.8	343.2		212.2	343.4		1054.3	18.6		85.5	10.4	12.0
Delay (s)	80.5	381.7		268.1	376.4		1102.7	69.4		145.7	69.0	56.7
Level of Service	F	F		F	F		F	E		F	E	E
Approach Delay (s)		347.4			366.5			421.5			70.2	
Approach LOS		F			F			F			E	

Intersection Summary

HCM Average Control Delay	337.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.21		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	168.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.97			0.93		1.00	0.95		1.00	1.00	
Flt Protected		0.97			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1106			1074		1118	2126		1118	2227	
Flt Permitted		0.62			0.77		0.22	1.00		0.15	1.00	
Satd. Flow (perm)		710			845		265	2126		181	2227	
Volume (vph)	139	30	48	184	21	202	42	1204	586	361	835	21
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	143	31	49	190	22	208	43	1241	604	372	861	22
RTOR Reduction (vph)	0	17	0	0	12	0	0	99	0	0	3	0
Lane Group Flow (vph)	0	206	0	0	408	0	43	1746	0	372	880	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		25.0			25.0		25.6	25.6		25.6	25.6	
Effective Green, g (s)		26.0			26.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio		0.43			0.43		0.43	0.43		0.43	0.43	
Clearance Time (s)		5.0			5.0		4.4	4.4		4.4	4.4	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		308			366		115	921		78	965	
v/s Ratio Prot								0.82			0.40	
v/s Ratio Perm		0.29			c0.48		0.16			c2.06		
v/c Ratio		0.67			1.11		0.37	1.90		4.77	0.91	
Uniform Delay, d1		13.6			17.0		11.5	17.0		17.0	15.9	
Progression Factor		1.00			1.00		0.25	0.16		1.00	1.00	
Incremental Delay, d2		5.4			81.4		0.8	403.7		1724.9	14.2	
Delay (s)		19.0			98.4		3.8	406.4		1741.9	30.2	
Level of Service		B			F		A	F		F	C	
Approach Delay (s)		19.0			98.4			397.3			537.5	
Approach LOS		B			F			F			F	

Intersection Summary

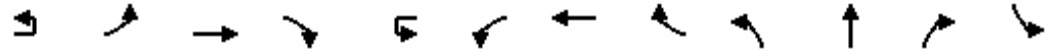
HCM Average Control Delay	388.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.93		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	164.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	1122		1118	1165		1118	2222		1118	2207	
Flt Permitted	0.35	1.00		0.34	1.00		0.17	1.00		0.15	1.00	
Satd. Flow (perm)	415	1122		401	1165		203	2222		174	2207	
Volume (vph)	192	303	136	55	399	29	103	1563	64	22	907	83
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	200	316	142	57	416	30	107	1628	67	23	945	86
RTOR Reduction (vph)	0	27	0	0	4	0	0	5	0	0	12	0
Lane Group Flow (vph)	200	431	0	57	442	0	107	1690	0	23	1019	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		4		4		2		2		2	
Permitted Phases	4		4		4		2		2		2	
Actuated Green, G (s)	23.4	23.4		23.4	23.4		26.5	26.5		26.5	26.5	
Effective Green, g (s)	25.0	25.0		25.0	25.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.45	0.45		0.45	0.45	
Clearance Time (s)	5.6	5.6		5.6	5.6		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	173	468		167	485		91	1000		78	993	
v/s Ratio Prot		0.38			0.38			c0.76				0.46
v/s Ratio Perm	c0.48			0.14			0.53			0.13		
v/c Ratio	1.16	0.92		0.34	0.91		1.18	1.69		0.29	1.03	
Uniform Delay, d1	17.5	16.6		11.9	16.5		16.5	16.5		10.5	16.5	
Progression Factor	0.59	0.52		1.00	1.00		2.30	2.43		0.49	0.61	
Incremental Delay, d2	76.6	3.2		1.2	21.3		102.4	311.5		3.3	24.1	
Delay (s)	86.9	11.9		13.1	37.7		140.4	351.6		8.5	34.1	
Level of Service	F	B		B	D		F	F		A	C	
Approach Delay (s)		34.7			34.9			339.1			33.5	
Approach LOS		C			C			F			C	

Intersection Summary

HCM Average Control Delay	171.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	146.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔↔	↔↔↔	↔		↔↔	↔↔↔	↔	↔	↔↔		↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		0.97	0.91	1.00		0.97	0.91	1.00	1.00	0.95		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		3072	4550	1417		3072	4550	1417	1583	3154		1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (perm)		3072	4550	1417		3072	4550	1417	1583	3154		1583
Volume (vph)	2	120	2540	147	49	162	2160	321	144	1312	37	224
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	2	124	2619	152	51	167	2227	331	148	1353	38	231
RTOR Reduction (vph)	0	0	0	51	0	0	0	82	0	2	0	0
Lane Group Flow (vph)	0	126	2619	101	0	218	2227	249	148	1389	0	231
Turn Type	Prot	Prot	pm+ov		Prot	Prot	pm+ov		Prot			Prot
Protected Phases	1	1	6	3	5	5	2	7	3	8		7
Permitted Phases				6				2				
Actuated Green, G (s)		10.2	32.0	44.0		13.5	35.3	47.3	12.0	42.3		12.0
Effective Green, g (s)		10.2	33.5	45.5		13.5	36.8	48.8	12.0	45.0		12.0
Actuated g/C Ratio		0.08	0.28	0.38		0.11	0.31	0.41	0.10	0.38		0.10
Clearance Time (s)		4.0	5.5	4.0		4.0	5.5	4.0	4.0	6.7		4.0
Vehicle Extension (s)		3.0	5.0	3.0		3.0	5.0	3.0	3.0	4.0		3.0
Lane Grp Cap (vph)		261	1270	585		346	1395	623	158	1183		158
v/s Ratio Prot		0.04	c0.58	0.02		c0.07	c0.49	0.04	0.09	c0.44		c0.15
v/s Ratio Perm				0.05				0.14				
v/c Ratio		0.48	2.06	0.17		0.63	1.60	0.40	0.94	1.17		1.46
Uniform Delay, d1		52.4	43.2	24.7		50.9	41.6	25.2	53.6	37.5		54.0
Progression Factor		0.59	1.31	2.87		0.46	0.89	1.51	1.00	1.00		1.03
Incremental Delay, d2		0.1	478.2	0.0		0.3	268.7	0.0	52.6	87.6		220.0
Delay (s)		31.0	535.0	71.0		23.7	305.7	38.1	106.2	125.1		275.6
Level of Service		C	F	E		C	F	D	F	F		F
Approach Delay (s)			488.7				251.6			123.3		
Approach LOS			F				F			F		

Intersection Summary			
HCM Average Control Delay	284.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	130.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Ideal Flow (vphpl)	1700	1700
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3167	1417
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3167	1417
Volume (vph)	873	68
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	900	70
RTOR Reduction (vph)	0	44
Lane Group Flow (vph)	900	26
Turn Type		Perm
Protected Phases	4	
Permitted Phases		4
Actuated Green, G (s)	42.3	42.3
Effective Green, g (s)	45.0	45.0
Actuated g/C Ratio	0.38	0.38
Clearance Time (s)	6.7	6.7
Vehicle Extension (s)	4.0	4.0
Lane Grp Cap (vph)	1188	531
v/s Ratio Prot	0.28	
v/s Ratio Perm		0.02
v/c Ratio	0.76	0.05
Uniform Delay, d1	32.7	23.9
Progression Factor	0.86	1.24
Incremental Delay, d2	1.1	0.0
Delay (s)	29.2	29.5
Level of Service	C	C
Approach Delay (s)	76.6	
Approach LOS	E	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.86		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4533		1583	5681		1583	3108		1583	3144	
Flt Permitted	0.13	1.00		0.12	1.00		0.22	1.00		0.13	1.00	
Satd. Flow (perm)	224	4533		198	5681		368	3108		215	3144	
Volume (vph)	64	2586	68	110	2404	157	51	1169	166	172	937	47
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	68	2751	72	117	2557	167	54	1244	177	183	997	50
RTOR Reduction (vph)	0	3	0	0	11	0	0	13	0	0	0	0
Lane Group Flow (vph)	68	2820	0	117	2713	0	54	1408	0	183	1047	0
Turn Type	Perm		pm+pt		Perm		pm+pt					
Protected Phases	2		1		6		8		7		4	
Permitted Phases	2		6		8		4					
Actuated Green, G (s)	28.7	28.7		41.1	41.1		25.6	25.6		38.5	38.5	
Effective Green, g (s)	29.7	29.7		42.1	42.1		27.0	27.0		39.9	39.9	
Actuated g/C Ratio	0.33	0.33		0.47	0.47		0.30	0.30		0.44	0.44	
Clearance Time (s)	5.0	5.0		3.5	5.0		5.4	5.4		3.5	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	1496		222	2657		110	932		231	1394	
v/s Ratio Prot	c0.62		0.05		c0.48		c0.45		0.08		c0.33	
v/s Ratio Perm	0.30		0.20		0.15		0.27					
v/c Ratio	0.92	1.89		0.53	1.02		0.49	1.51		0.79	0.75	
Uniform Delay, d1	29.0	30.1		20.1	23.9		25.9	31.5		21.1	20.9	
Progression Factor	0.63	0.69		2.23	1.79		0.85	0.87		1.00	1.00	
Incremental Delay, d2	16.9	398.6		0.2	11.9		8.5	233.2		16.8	3.8	
Delay (s)	35.2	419.4		45.0	54.7		30.4	260.6		37.9	24.7	
Level of Service	D	F		D	D		C	F		D	C	
Approach Delay (s)	410.4		54.3		252.2		26.6					
Approach LOS	F		D		F		C					

Intersection Summary

HCM Average Control Delay	206.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	130.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.99
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	4550	1417	1583	3167	1417	1583	3126	3126
Flt Permitted	0.14	1.00	1.00	0.14	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	232	4550	1417	233	4550	1417	1583	3167	1417	1583	3126	3126
Volume (vph)	223	2026	79	97	1764	277	203	939	116	304	773	73
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	228	2067	81	99	1800	283	207	958	118	310	789	74
RTOR Reduction (vph)	0	0	47	0	0	26	0	0	0	0	8	0
Lane Group Flow (vph)	228	2067	34	99	1800	257	207	958	118	310	855	0
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	Prot		pm+ov		Prot	
Protected Phases	1	6	3	5	2	7	3	8	5	7	4	
Permitted Phases	6		6	2		2			8			
Actuated Green, G (s)	33.3	26.8	35.7	33.1	26.7	33.2	8.9	32.2	38.6	6.5	29.8	
Effective Green, g (s)	34.7	28.7	37.1	34.5	28.6	34.6	8.4	33.4	39.3	6.0	31.0	
Actuated g/C Ratio	0.39	0.32	0.41	0.38	0.32	0.38	0.09	0.37	0.44	0.07	0.34	
Clearance Time (s)	3.5	5.9	3.5	3.5	5.9	3.5	3.5	5.2	3.5	3.5	5.2	
Vehicle Extension (s)	3.0	5.0	3.0	3.0	5.0	3.0	3.0	5.0	3.0	3.0	5.0	
Lane Grp Cap (vph)	180	1451	584	178	1446	608	148	1175	682	106	1077	
v/s Ratio Prot	c0.08	c0.45	0.01	0.04	0.40	0.03	c0.13	0.30	0.01	c0.20	c0.27	
v/s Ratio Perm	0.40		0.02	0.18		0.15			0.07			
v/c Ratio	1.27	1.42	0.06	0.56	1.24	0.42	1.40	0.82	0.17	2.92	0.79	
Uniform Delay, d1	26.4	30.6	15.9	22.8	30.7	20.4	40.8	25.5	15.4	42.0	26.6	
Progression Factor	1.90	0.23	0.05	1.00	1.00	1.00	1.00	1.00	1.00	1.39	0.88	
Incremental Delay, d2	124.1	191.4	0.0	3.7	116.2	0.5	215.0	5.0	0.1	880.7	2.8	
Delay (s)	174.3	198.5	0.9	26.5	146.9	20.8	255.8	30.6	15.6	938.9	26.1	
Level of Service	F	F	A	C	F	C	F	C	B	F	C	
Approach Delay (s)		189.4			125.1			65.5			267.3	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	159.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	113.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 92: Le Conte Ave & Gayley Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.94		1.00	1.00	0.84	1.00	0.97		1.00	1.00	
Flpb, ped/bikes	0.86	1.00		0.90	1.00	1.00	0.94	1.00		0.97	1.00	
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1360	1452		1427	1667	1196	1487	2979		1529	3143	
Flt Permitted	0.74	1.00		0.64	1.00	1.00	0.44	1.00		0.35	1.00	
Satd. Flow (perm)	1059	1452		958	1667	1196	696	2979		570	3143	
Volume (vph)	19	75	63	116	25	57	22	510	152	89	481	12
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	20	80	67	123	27	61	23	543	162	95	512	13
RTOR Reduction (vph)	0	40	0	0	0	44	0	37	0	0	2	0
Lane Group Flow (vph)	20	107	0	123	27	17	23	668	0	95	523	0
Conf. Peds. (#/hr)	130		66	66		130	66		85	85		66
Conf. Bikes (#/hr)			1			1			5			14
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4	2			2		
Actuated Green, G (s)	20.2	20.2		20.2	20.2	20.2	45.3	45.3		45.3	45.3	
Effective Green, g (s)	21.0	21.0		21.0	21.0	21.0	46.0	46.0		46.0	46.0	
Actuated g/C Ratio	0.28	0.28		0.28	0.28	0.28	0.61	0.61		0.61	0.61	
Clearance Time (s)	4.8	4.8		4.8	4.8	4.8	4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	297	407		268	467	335	427	1827		350	1928	
v/s Ratio Prot		0.07			0.02			c0.22			0.17	
v/s Ratio Perm	0.02			c0.13		0.01	0.03			0.17		
v/c Ratio	0.07	0.26		0.46	0.06	0.05	0.05	0.37		0.27	0.27	
Uniform Delay, d1	19.8	21.0		22.3	19.8	19.7	5.8	7.2		6.7	6.7	
Progression Factor	1.00	1.00		0.92	0.99	1.08	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	1.6		5.5	0.2	0.3	0.2	0.6		1.9	0.3	
Delay (s)	20.3	22.5		26.0	19.9	21.5	6.0	7.8		8.6	7.1	
Level of Service	C	C		C	B	C	A	A		A	A	
Approach Delay (s)		22.3			23.9			7.7			7.3	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↗	↘		↗	↕	↘	↗	↕	↘	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	
Total Lost time (s)				4.0	4.0		4.0	4.0	4.0	4.0	4.0		
Lane Util. Factor				1.00	1.00		1.00	0.95	1.00	1.00	0.95		
Frbp, ped/bikes				1.00	0.89		1.00	1.00	0.81	1.00	1.00		
Flpb, ped/bikes				1.00	1.00		0.98	1.00	1.00	0.97	1.00		
Frt				1.00	0.85		1.00	1.00	0.85	1.00	1.00		
Flt Protected				0.95	1.00		0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)				1118	894		1098	2235	807	1084	2234		
Flt Permitted				0.95	1.00		0.44	1.00	1.00	0.21	1.00		
Satd. Flow (perm)				1118	894		513	2235	807	236	2234		
Volume (vph)	0	0	0	125	4	138	3	1047	172	233	505	2	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	0	0	0	129	4	142	3	1079	177	240	521	2	
RTOR Reduction (vph)	0	0	0	0	100	0	0	0	71	0	0	0	
Lane Group Flow (vph)	0	0	0	129	46	0	3	1079	106	240	523	0	
Conf. Peds. (#/hr)	55						55	20		161	161	20	
Conf. Bikes (#/hr)							1		14				
Turn Type	Split		Perm			Perm		Perm custom					
Protected Phases	3	3			4			6					
Permitted Phases				4			6		6	2	2		
Actuated Green, G (s)				21.0	21.0		44.4	44.4	44.4	44.4	44.4		
Effective Green, g (s)				22.0	22.0		45.0	45.0	45.0	45.0	45.0		
Actuated g/C Ratio				0.29	0.29		0.60	0.60	0.60	0.60	0.60		
Clearance Time (s)				5.0	5.0		4.6	4.6	4.6	4.6	4.6		
Vehicle Extension (s)				3.0	3.0		3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)				328	262		308	1341	484	142	1340		
v/s Ratio Prot					0.05			0.48					
v/s Ratio Perm				c0.12			0.01		0.13	c1.02	0.23		
v/c Ratio				0.39	0.17		0.01	0.80	0.22	1.69	0.39		
Uniform Delay, d1				21.2	19.7		6.0	11.6	6.9	15.0	7.8		
Progression Factor				1.49	4.47		0.87	0.87	1.04	1.00	1.00		
Incremental Delay, d2				0.4	0.2		0.0	0.5	0.1	339.0	0.9		
Delay (s)				32.0	88.4		5.3	10.6	7.3	354.0	8.7		
Level of Service				C	F		A	B	A	F	A		
Approach Delay (s)		0.0			61.9			10.1			117.3		
Approach LOS		A			E			B			F		
Intersection Summary													
HCM Average Control Delay			51.9									HCM Level of Service	D
HCM Volume to Capacity ratio			1.27										
Actuated Cycle Length (s)			75.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			94.2%									ICU Level of Service	F
Analysis Period (min)			15										
c Critical Lane Group													



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		1.00	0.86		1.00	0.95	1.00	1.00	1.00	0.88
Frbp, ped/bikes	1.00	0.98		1.00	0.95		1.00	1.00	0.67	1.00	1.00	0.85
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.95	1.00	1.00	0.85	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3925		1118	3751		1060	2235	667	955	1176	1500
Flt Permitted	0.95	1.00		0.06	1.00		0.37	1.00	1.00	0.40	1.00	1.00
Satd. Flow (perm)	2168	3925		71	3751		415	2235	667	407	1176	1500
Volume (vph)	338	3656	183	44	2627	491	66	497	72	130	189	305
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	360	3889	195	47	2795	522	70	529	77	138	201	324
RTOR Reduction (vph)	0	4	0	0	21	0	0	0	0	0	0	0
Lane Group Flow (vph)	360	4080	0	47	3296	0	70	529	77	138	201	324
Confl. Peds. (#/hr)	215		164	164		215	178		281	281		178
Confl. Bikes (#/hr)			8			7			18			3
Turn Type	Prot			Perm			pm+pt		Perm	Perm		pm+ov
Protected Phases	1	6			2		3	8			4	1
Permitted Phases				2			8		8	4		4
Actuated Green, G (s)	27.5	97.1		65.6	65.6		42.1	42.1	42.1	30.3	30.3	57.8
Effective Green, g (s)	27.5	98.1		66.6	66.6		43.9	43.9	43.9	32.1	32.1	59.6
Actuated g/C Ratio	0.18	0.65		0.44	0.44		0.29	0.29	0.29	0.21	0.21	0.40
Clearance Time (s)	4.0	5.0		5.0	5.0		4.0	5.8	5.8	5.8	5.8	4.0
Vehicle Extension (s)	2.0	4.0		4.0	4.0		2.0	3.0	3.0	3.0	3.0	2.0
Lane Grp Cap (vph)	397	2567		32	1665		155	654	195	87	252	636
v/s Ratio Prot	0.17	c1.04			c0.88		0.02	c0.24			0.17	0.09
v/s Ratio Perm				0.67			0.11		0.12	c0.34		0.12
v/c Ratio	0.91	1.59		1.47	1.98		0.45	0.81	0.39	1.59	0.80	0.51
Uniform Delay, d1	60.0	26.0		41.7	41.7		41.0	49.2	42.4	59.0	55.9	34.2
Progression Factor	0.99	1.09		0.45	0.46		1.00	1.00	1.00	1.01	1.01	1.16
Incremental Delay, d2	3.0	265.3		225.8	441.0		0.8	7.3	1.3	308.4	15.0	0.2
Delay (s)	62.3	293.5		244.6	460.2		41.8	56.5	43.7	368.1	71.4	39.9
Level of Service	E	F		F	F		D	E	D	F	E	D
Approach Delay (s)		274.8			457.2			53.5			117.7	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM Average Control Delay	314.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.76		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	148.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑		↖		↖		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0			
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00			
Frt		0.99		1.00	1.00		1.00		0.85			
Flt Protected		1.00		0.95	1.00		0.95		1.00			
Satd. Flow (prot)		3124		1583	3167		1583		1417			
Flt Permitted		1.00		0.06	1.00		0.76		1.00			
Satd. Flow (perm)		3124		107	3167		1262		1417			
Volume (vph)	0	1954	192	894	1342	0	71	0	678	0	0	0
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	2014	198	922	1384	0	73	0	699	0	0	0
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	184	0	0	0
Lane Group Flow (vph)	0	2206	0	922	1384	0	73	0	515	0	0	0
Turn Type				pm+pt			custom		Over	Perm		
Protected Phases		2		1	6				1		4	
Permitted Phases				6			8			4		
Actuated Green, G (s)		57.2		100.2	100.2		10.8		39.0			
Effective Green, g (s)		58.2		101.2	101.2		10.8		39.0			
Actuated g/C Ratio		0.49		0.84	0.84		0.09		0.32			
Clearance Time (s)		5.0		4.0	5.0		4.0		4.0			
Vehicle Extension (s)		4.0		3.0	3.0		3.0		3.0			
Lane Grp Cap (vph)		1515		570	2671		114		461			
v/s Ratio Prot		0.71		c0.53	0.44				0.36			
v/s Ratio Perm				c0.84			c0.06					
v/c Ratio		1.46		1.62	0.52		0.64		1.12			
Uniform Delay, d1		30.9		42.7	2.6		52.7		40.5			
Progression Factor		1.00		1.17	0.68		1.00		1.00			
Incremental Delay, d2		208.9		284.4	0.6		11.6		78.2			
Delay (s)		239.8		334.4	2.4		64.4		118.7			
Level of Service		F		F	A		E		F			
Approach Delay (s)		239.8			135.1			113.6			0.0	
Approach LOS		F			F			F			A	

Intersection Summary

HCM Average Control Delay	175.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.50		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	137.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑		↔↔	↑↑↑		↔	↑↑	↔	↔	↑↑	↔↔
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		0.97	0.86		1.00	0.95	1.00	1.00	0.95	0.88
Frbp, ped/bikes	1.00	0.97		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3874		2168	3980		1103	2235	967	1111	2235	1674
Flt Permitted	0.95	1.00		0.95	1.00		0.37	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)	2168	3874		2168	3980		428	2235	967	320	2235	1674
Volume (vph)	913	4151	445	17	2840	281	254	561	132	478	289	318
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	992	4512	484	18	3087	305	276	610	143	520	314	346
RTOR Reduction (vph)	0	12	0	0	11	0	0	0	0	0	0	4
Lane Group Flow (vph)	992	4984	0	18	3381	0	276	610	143	520	314	342
Conf. Peds. (#/hr)	13		99	99		13	48		10	10		48
Conf. Bikes (#/hr)			16			5			13			18
Turn Type	Prot			Prot		pm+pt		pm+ov	Perm		pm+ov	
Protected Phases	5	2		1	6	3	8	1		4	4	5
Permitted Phases						8		8	4			4
Actuated Green, G (s)	30.0	91.5		5.0	66.5	37.1	37.1	42.1	28.1	28.1	58.1	
Effective Green, g (s)	30.0	93.0		5.0	68.0	40.0	40.0	45.0	31.0	31.0	61.0	
Actuated g/C Ratio	0.20	0.62		0.03	0.45	0.27	0.27	0.30	0.21	0.21	0.41	
Clearance Time (s)	4.0	5.5		4.0	5.5	4.0	6.9	4.0	6.9	6.9	4.0	
Vehicle Extension (s)	1.0	4.0		1.0	4.0	3.0	2.0	1.0	2.0	2.0	1.0	
Lane Grp Cap (vph)	434	2402		72	1804	137	596	316	66	462	681	
v/s Ratio Prot	c0.46	c1.29		0.01	c0.85	c0.07	0.27	0.02		0.14	0.10	
v/s Ratio Perm						0.47		0.13	c1.63		0.10	
v/c Ratio	2.29	2.07		0.25	1.87	2.01	1.02	0.45	7.88	0.68	0.50	
Uniform Delay, d1	60.0	28.5		70.7	41.0	56.6	55.0	42.5	59.5	54.9	33.2	
Progression Factor	0.72	0.41		1.24	0.67	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	579.2	483.8		0.1	393.6	481.3	43.0	0.4	3126.4	3.1	0.2	
Delay (s)	622.4	495.5		87.8	420.9	537.9	98.0	42.9	3185.9	58.0	33.4	
Level of Service	F	F		F	F	F	F	D	F	E	C	
Approach Delay (s)		516.5			419.2		208.3			1429.2		
Approach LOS		F			F		F			F		

Intersection Summary			
HCM Average Control Delay	553.4	HCM Level of Service	F
HCM Volume to Capacity ratio	3.55		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	193.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑↑↑		↔	↑↑↑		↔	↑↑		↔	↑↑	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.86		0.97	0.81		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	4026		2168	4736		1118	2095		1118	2183	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1118	4026		2168	4736		1118	2095		1118	2183	
Volume (vph)	70	3696	131	138	3157	131	108	564	405	310	1175	216
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	71	3771	134	141	3221	134	110	576	413	316	1199	220
RTOR Reduction (vph)	0	3	0	0	5	0	0	86	0	0	0	0
Lane Group Flow (vph)	71	3902	0	141	3350	0	110	903	0	316	1419	0
Turn Type	Prot		Prot		Prot		Prot		Prot			
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	11.0	68.9		15.0	72.9		16.0	33.0		13.6	30.6	
Effective Green, g (s)	11.0	70.4		15.0	74.4		16.0	35.0		13.6	32.6	
Actuated g/C Ratio	0.07	0.47		0.10	0.50		0.11	0.23		0.09	0.22	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	1.0	4.0		1.0	4.0		1.0	4.0		1.0	4.0	
Lane Grp Cap (vph)	82	1890		217	2349		119	489		101	474	
v/s Ratio Prot	0.06	c0.97		0.07	c0.71		0.10	c0.43		0.28	c0.65	
v/s Ratio Perm												
v/c Ratio	0.87	2.06		0.65	1.43		0.92	1.85		3.13	2.99	
Uniform Delay, d1	68.8	39.8		65.0	37.8		66.4	57.5		68.2	58.7	
Progression Factor	1.03	1.15		0.59	0.29		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.4	479.2		0.5	192.1		58.3	389.0		983.4	902.8	
Delay (s)	78.9	524.9		38.9	203.0		124.7	446.5		1051.6	961.5	
Level of Service	E	F		D	F		F	F		F	F	
Approach Delay (s)		517.0			196.4			414.3			977.9	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	474.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.18		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	175.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕	↖	↖	↕↕	↖	↖	↕↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	4521		1583	4550	1417	1583	3167	1417	1583	3130	
Flt Permitted	0.11	1.00		0.95	1.00	1.00	0.11	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	190	4521		1583	4550	1417	189	3167	1417	189	3130	
Volume (vph)	55	2295	103	102	2385	139	168	1120	302	5	1086	90
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	57	2391	107	106	2484	145	175	1167	315	5	1131	94
RTOR Reduction (vph)	0	5	0	0	0	10	0	0	104	0	1	0
Lane Group Flow (vph)	57	2493	0	106	2484	135	175	1167	211	5	1224	0
Turn Type	Perm			Prot		Perm	Perm		Perm	Perm		
Protected Phases	8			7	4			6			2	
Permitted Phases	8					4	6		6		2	
Actuated Green, G (s)	34.0	34.0		8.2	45.7	45.7	34.3	34.3	34.3	34.3	34.3	
Effective Green, g (s)	35.0	35.0		7.7	46.7	46.7	35.3	35.3	35.3	35.3	35.3	
Actuated g/C Ratio	0.39	0.39		0.09	0.52	0.52	0.39	0.39	0.39	0.39	0.39	
Clearance Time (s)	5.0	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	74	1758		135	2361	735	74	1242	556	74	1228	
v/s Ratio Prot	c0.55			0.07	c0.55			0.37			0.39	
v/s Ratio Perm	0.30					0.10	c0.93		0.15	0.03		
v/c Ratio	0.77	1.42		0.79	1.05	0.18	2.36	0.94	0.38	0.07	1.00	
Uniform Delay, d1	24.0	27.5		40.3	21.6	11.5	27.4	26.3	19.5	17.1	27.3	
Progression Factor	0.90	0.83		0.89	1.71	2.16	0.59	0.56	0.22	1.00	1.00	
Incremental Delay, d2	37.4	190.3		7.9	27.0	0.1	618.0	1.9	0.2	1.8	25.0	
Delay (s)	59.1	213.1		43.7	64.0	25.1	634.1	16.7	4.6	18.8	52.3	
Level of Service	E	F		D	E	C	F	B	A	B	D	
Approach Delay (s)	209.7			61.2			79.6				52.2	
Approach LOS	F			E			E				D	

Intersection Summary

HCM Average Control Delay	110.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	120.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑↑		↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	4522		1583	3119		1583	3167	1417
Flt Permitted	0.12	1.00	1.00	0.11	1.00		0.95	1.00		0.14	1.00	1.00
Satd. Flow (perm)	208	4550	1417	185	4522		1583	3119		238	3167	1417
Volume (vph)	191	2103	114	102	1579	67	255	1487	167	54	1156	108
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	195	2146	116	104	1611	68	260	1517	170	55	1180	110
RTOR Reduction (vph)	0	0	23	0	5	0	0	10	0	0	0	11
Lane Group Flow (vph)	195	2146	93	104	1674	0	260	1677	0	55	1180	99
Turn Type	Perm		pm+ov	pm+pt			Prot			Perm		Perm
Protected Phases		6	3	5	2		3	8			4	
Permitted Phases	6		6	2						4		4
Actuated Green, G (s)	30.5	30.5	41.0	38.5	38.5		10.5	41.5		27.5	27.5	27.5
Effective Green, g (s)	32.0	32.0	42.0	40.0	40.0		10.0	42.0		28.0	28.0	28.0
Actuated g/C Ratio	0.36	0.36	0.47	0.44	0.44		0.11	0.47		0.31	0.31	0.31
Clearance Time (s)	5.5	5.5	3.5	3.0	5.5		3.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	2.0	3.0	3.0		2.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	1618	724	144	2010		176	1456		74	985	441
v/s Ratio Prot		0.47	0.01	0.03	c0.37		c0.16	c0.54			0.37	
v/s Ratio Perm	c0.94		0.05	0.29						0.23		0.07
v/c Ratio	2.64	1.33	0.13	0.72	0.83		1.48	1.15		0.74	1.20	0.22
Uniform Delay, d1	29.0	29.0	13.6	44.0	22.1		40.0	24.0		27.8	31.0	23.0
Progression Factor	1.00	1.00	1.00	2.08	1.32		1.00	1.00		0.69	0.72	0.51
Incremental Delay, d2	773.1	151.2	0.0	1.6	0.4		242.8	76.8		15.5	91.8	0.3
Delay (s)	802.1	180.2	13.6	93.1	29.5		282.8	100.8		34.5	114.2	12.1
Level of Service	F	F	B	F	C		F	F		C	F	B
Approach Delay (s)		221.7			33.2			125.1			102.6	
Approach LOS		F			C			F			F	

Intersection Summary

HCM Average Control Delay	130.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	125.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗↗		↘	↗↗↗	↗	↘	↗↗	↗	↗↗	↗↗	↗↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	0.86	0.86	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (prot)	1304	3730		1304	3747	1141	1304	2608	1144	2243	2264	
Flt Permitted	0.07	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (perm)	96	3730		1304	3747	1141	1304	2608	1144	2243	2264	
Volume (vph)	32	1817	42	87	1722	1246	149	152	178	1448	237	28
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	34	1933	45	93	1832	1326	159	162	189	1540	252	30
RTOR Reduction (vph)	0	2	0	0	0	457	0	0	0	0	2	0
Lane Group Flow (vph)	34	1976	0	93	1832	869	159	162	189	1027	793	0
Confl. Peds. (#/hr)	5		9	9		5	56		6	6		56
Confl. Bikes (#/hr)			4			5			8			8
Turn Type	Perm		Prot		Perm	Split	pm+ov		Split			
Protected Phases	6		5		2	3	3	5	4		4	
Permitted Phases	6				2			3				
Actuated Green, G (s)	56.0	56.0	10.0		70.0	70.0	15.0	15.0	25.0	50.0	50.0	
Effective Green, g (s)	57.0	57.0	10.0		71.0	71.0	16.0	16.0	26.0	51.0	51.0	
Actuated g/C Ratio	0.38	0.38	0.07		0.47	0.47	0.11	0.11	0.17	0.34	0.34	
Clearance Time (s)	5.0	5.0	4.0		5.0	5.0	5.0	5.0	4.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0	2.0		4.0	4.0	2.0	2.0	2.0	4.0	4.0	
Lane Grp Cap (vph)	36	1417	87		1774	540	139	278	198	763	770	
v/s Ratio Prot	0.53		0.07		0.49	c0.12		0.06	0.06	c0.46	0.35	
v/s Ratio Perm	0.35				c0.76				0.10			
v/c Ratio	0.94	1.39	1.07		1.03	1.61	1.14	0.58	0.95	1.35	1.26dl	
Uniform Delay, d1	45.0	46.5	70.0		39.5	39.5	67.0	63.8	61.4	49.5	49.5	
Progression Factor	1.41	1.41	1.09		1.09	6.20	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	105.1	180.4	49.2		17.2	274.8	120.2	2.0	50.3	164.4	40.3	
Delay (s)	168.4	246.2	125.7		60.3	519.6	187.2	65.8	111.7	213.9	89.8	
Level of Service	F	F	F		E	F	F	E	F	F	F	
Approach Delay (s)	244.8				249.5		120.7				159.8	
Approach LOS	F				F		F				F	

Intersection Summary

HCM Average Control Delay	218.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.46		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	143.5%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑		↙	↑↑	↗		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	0.99		1.00	1.00	0.85		1.00			1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.99	
Satd. Flow (prot)	1583	4500		1583	3167	1417		1640			3116	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.43			0.56	
Satd. Flow (perm)	1583	4500		1583	3167	1417		717			1770	
Volume (vph)	171	1105	88	32	1111	136	141	425	19	149	400	11
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	190	1228	98	36	1234	151	157	472	21	166	444	12
RTOR Reduction (vph)	0	8	0	0	0	83	0	1	0	0	1	0
Lane Group Flow (vph)	190	1318	0	36	1234	68	0	649	0	0	621	0
Turn Type	Prot			Prot		Perm	Prot				Prot	
Protected Phases	1	6		5	2		3	8			7	4
Permitted Phases						2						
Actuated Green, G (s)	11.6	48.1		3.6	40.1	40.1		26.0			26.0	
Effective Green, g (s)	11.6	48.4		3.6	40.4	40.4		26.0			26.0	
Actuated g/C Ratio	0.13	0.54		0.04	0.45	0.45		0.29			0.29	
Clearance Time (s)	4.0	4.3		4.0	4.3	4.3		4.0			4.0	
Vehicle Extension (s)	3.0	5.7		3.0	5.5	5.5		3.0			3.0	
Lane Grp Cap (vph)	204	2420		63	1422	636		207			511	
v/s Ratio Prot	c0.12	0.29		0.02	c0.39							
v/s Ratio Perm						0.05		c0.91			0.35	
v/c Ratio	0.93	0.54		0.57	0.87	0.11		3.14			83.00dl	
Uniform Delay, d1	38.8	13.6		42.4	22.4	14.4		32.0			32.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	43.9	0.9		11.9	7.4	0.3		974.1			113.5	
Delay (s)	82.7	14.5		54.4	29.8	14.7		1006.1			145.5	
Level of Service	F	B		D	C	B		F			F	
Approach Delay (s)		23.0			28.8			1006.1			145.5	
Approach LOS		C			C			F			F	

Intersection Summary

HCM Average Control Delay	194.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	110.8%	ICU Level of Service	H
Analysis Period (min)	15		
dl	Defacto Left Lane. Recode with 1 though lane as a left lane.		
dr	Defacto Right Lane. Recode with 1 though lane as a right lane.		
c	Critical Lane Group		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑	↗	↗	↑↑	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.91	1.00	0.96	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.97	1.00	1.00	0.96	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	3725		1304	3685		1265	2608	1062	1256	2415	
Flt Permitted	0.06	1.00		0.09	1.00		0.24	1.00	1.00	0.40	1.00	
Satd. Flow (perm)	85	3725		128	3685		314	2608	1062	532	2415	
Volume (vph)	211	1589	37	54	1793	87	110	381	168	180	440	155
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	224	1690	39	57	1907	93	117	405	179	191	468	165
RTOR Reduction (vph)	0	1	0	0	4	0	0	0	17	0	10	0
Lane Group Flow (vph)	224	1728	0	57	1996	0	117	405	162	191	623	0
Conf. Peds. (#/hr)	67		48	48		67	40		47	47		40
Conf. Bikes (#/hr)			7			2			2			5
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		6			2			8				4
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	95.5	95.5		95.5	95.5		46.0	46.0	46.0	46.0	46.0	
Effective Green, g (s)	96.0	96.0		96.0	96.0		46.0	46.0	46.0	46.0	46.0	
Actuated g/C Ratio	0.64	0.64		0.64	0.64		0.31	0.31	0.31	0.31	0.31	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	54	2384		82	2358		96	800	326	163	741	
v/s Ratio Prot		0.46			0.54			0.16			0.26	
v/s Ratio Perm	c2.63			0.44			c0.37		0.15	0.36		
v/c Ratio	4.15	0.72		0.70	0.85		1.22	0.51	0.50	1.17	0.84	
Uniform Delay, d1	27.0	18.1		17.5	21.2		52.0	42.7	42.5	52.0	48.6	
Progression Factor	1.00	1.00		1.48	1.58		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1459.3	2.0		4.4	0.4		161.9	2.3	5.3	124.2	11.1	
Delay (s)	1486.3	20.1		30.2	34.0		213.9	45.0	47.8	176.2	59.7	
Level of Service	F	C		C	C		F	D	D	F	E	
Approach Delay (s)		188.3			33.9			73.9			86.7	
Approach LOS		F			C			E			F	

Intersection Summary

HCM Average Control Delay	101.3	HCM Level of Service	F
HCM Volume to Capacity ratio	3.18		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	115.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕		↕	↕	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.93			0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1546			1603		1583	1645		1583	1667	1417
Flt Permitted		0.95			0.85		0.45	1.00		0.36	1.00	1.00
Satd. Flow (perm)		1472			1383		751	1645		592	1667	1417
Volume (vph)	36	93	123	33	91	32	181	515	49	43	431	91
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	101	134	36	99	35	197	560	53	47	468	99
RTOR Reduction (vph)	0	66	0	0	18	0	0	5	0	0	0	35
Lane Group Flow (vph)	0	208	0	0	152	0	197	608	0	47	468	64
Turn Type		Perm		Perm		Perm		Perm		Perm		Perm
Protected Phases		8		4		4		2		6		6
Permitted Phases		8		4		2		2		6		6
Actuated Green, G (s)		12.7			12.7		38.5	38.5		38.5	38.5	38.5
Effective Green, g (s)		13.2			13.2		38.8	38.8		38.8	38.8	38.8
Actuated g/C Ratio		0.22			0.22		0.65	0.65		0.65	0.65	0.65
Clearance Time (s)		4.5			4.5		4.3	4.3		4.3	4.3	4.3
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		324			304		486	1064		383	1078	916
v/s Ratio Prot								c0.37			0.28	
v/s Ratio Perm		c0.14			0.11		0.26			0.08		0.05
v/c Ratio		0.64			0.50		0.41	0.57		0.12	0.43	0.07
Uniform Delay, d1		21.3			20.5		5.1	5.9		4.1	5.2	3.9
Progression Factor		1.00			1.00		0.48	0.47		1.00	1.00	1.00
Incremental Delay, d2		4.3			1.3		0.7	0.6		0.7	1.3	0.1
Delay (s)		25.6			21.8		3.1	3.4		4.7	6.5	4.1
Level of Service		C			C		A	A		A	A	A
Approach Delay (s)		25.6			21.8			3.3			6.0	
Approach LOS		C			C			A			A	

Intersection Summary

HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶		↶	↶	↶	↶	↶	↶
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	3715		1304	3705		1304	1373	1167	1304	1354	
Flt Permitted	0.17	1.00		0.17	1.00		0.31	1.00	1.00	0.25	1.00	
Satd. Flow (perm)	239	3715		239	3705		428	1373	1167	341	1354	
Volume (vph)	26	1419	86	82	1762	141	109	594	112	45	475	46
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	27	1478	90	85	1835	147	114	619	117	47	495	48
RTOR Reduction (vph)	0	11	0	0	15	0	0	0	3	0	1	0
Lane Group Flow (vph)	27	1557	0	85	1967	0	114	619	114	47	542	0
Turn Type	Perm			Perm			Perm			Perm	Perm	
Protected Phases	2			2			4			4	4	
Permitted Phases	2			2			4			4	4	
Actuated Green, G (s)	22.4	22.4		22.4	22.4		28.0	28.0	28.0	28.0	28.0	
Effective Green, g (s)	23.0	23.0		23.0	23.0		29.0	29.0	29.0	29.0	29.0	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.48	0.48	0.48	0.48	0.48	
Clearance Time (s)	4.6	4.6		4.6	4.6		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)	92	1424		92	1420		207	664	564	165	654	
v/s Ratio Prot		0.42			c0.53			c0.45			0.40	
v/s Ratio Perm	0.11			0.36			0.27		0.10	0.14		
v/c Ratio	0.29	1.09		0.92	1.38		0.55	0.93	0.20	0.28	0.83	
Uniform Delay, d1	12.9	18.5		17.7	18.5		10.9	14.6	8.9	9.3	13.4	
Progression Factor	1.00	1.00		1.36	1.53		1.00	1.00	1.00	0.69	0.74	
Incremental Delay, d2	7.9	53.6		61.7	176.5		10.1	21.8	0.8	3.8	10.4	
Delay (s)	20.8	72.1		85.7	204.8		21.1	36.3	9.7	10.2	20.3	
Level of Service	C	E		F	F		C	D	A	B	C	
Approach Delay (s)		71.2			199.9			30.6			19.5	
Approach LOS		E			F			C			B	

Intersection Summary

HCM Average Control Delay	110.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	136.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑	↗	↘	↑↑		↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.86	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4485		1583	5733	1417	1583	3045		1583	3167	1417
Flt Permitted	0.10	1.00		0.12	1.00	1.00	0.32	1.00		0.12	1.00	1.00
Satd. Flow (perm)	167	4485		205	5733	1417	532	3045		208	3167	1417
Volume (vph)	22	1181	123	126	1847	289	392	926	318	366	580	82
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	22	1205	126	129	1885	295	400	945	324	373	592	84
RTOR Reduction (vph)	0	14	0	0	0	15	0	17	0	0	0	7
Lane Group Flow (vph)	22	1317	0	129	1885	280	400	1252	0	373	592	77
Turn Type	Perm			Perm		pm+ov	pm+pt			pm+pt		Perm
Protected Phases	6			2		7	3		8	7		4
Permitted Phases	6			2		2	8			4		4
Actuated Green, G (s)	39.0	39.0		39.0	39.0	45.0	36.1	30.1		36.1	30.1	30.1
Effective Green, g (s)	40.0	40.0		40.0	40.0	46.0	38.0	32.0		38.0	32.0	32.0
Actuated g/C Ratio	0.44	0.44		0.44	0.44	0.51	0.42	0.36		0.42	0.36	0.36
Clearance Time (s)	5.0	5.0		5.0	5.0	4.0	4.0	5.9		4.0	5.9	5.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	1993		91	2548	787	295	1083		179	1126	504
v/s Ratio Prot		0.29			0.33	0.02	0.09	0.41		c0.14	0.19	
v/s Ratio Perm	0.13			c0.63		0.17	0.48			c0.74		0.05
v/c Ratio	0.30	0.66		1.42	0.74	0.36	1.36	1.16		2.08	0.53	0.15
Uniform Delay, d1	16.0	19.7		25.0	20.7	13.1	24.8	29.0		24.0	23.0	19.8
Progression Factor	1.00	1.00		1.25	1.27	1.89	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	10.0	1.7		193.8	0.2	0.0	180.8	81.0		506.3	1.8	0.6
Delay (s)	26.0	21.4		225.0	26.5	24.9	205.6	110.0		530.3	24.7	20.4
Level of Service	C	C		F	C	C	F	F		F	C	C
Approach Delay (s)		21.5			37.4			132.9			204.2	
Approach LOS		C			D			F			F	

Intersection Summary

HCM Average Control Delay	86.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	0.99		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3708		1304	3747	1254	
Flt Permitted	1.00		0.07	1.00	0.97	
Satd. Flow (perm)	3708		99	3747	1254	
Volume (vph)	1688	127	42	1897	174	144
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1758	132	44	1976	181	150
RTOR Reduction (vph)	8	0	0	0	10	0
Lane Group Flow (vph)	1882	0	44	1976	321	0
Turn Type			Perm			
Protected Phases	6			2	4	
Permitted Phases			2			
Actuated Green, G (s)	55.1		55.1	55.1	26.1	
Effective Green, g (s)	55.2		55.2	55.2	26.8	
Actuated g/C Ratio	0.61		0.61	0.61	0.30	
Clearance Time (s)	4.1		4.1	4.1	4.7	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2274		61	2298	373	
v/s Ratio Prot	0.51			c0.53	c0.26	
v/s Ratio Perm			0.44			
v/c Ratio	0.83		0.72	0.86	0.86	
Uniform Delay, d1	13.7		12.1	14.2	29.8	
Progression Factor	0.44		1.00	1.00	1.00	
Incremental Delay, d2	3.0		53.5	4.5	18.0	
Delay (s)	9.0		65.6	18.7	47.9	
Level of Service	A		E	B	D	
Approach Delay (s)	9.0			19.7	47.9	
Approach LOS	A			B	D	
Intersection Summary						
HCM Average Control Delay			17.2		HCM Level of Service	B
HCM Volume to Capacity ratio			0.86			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			81.5%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.98			1.00	0.96
Flpb, ped/bikes	1.00	1.00		0.99	1.00			0.99			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.91			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.98	1.00
Satd. Flow (prot)	1300	3738		1295	3739			1201			1339	1123
Flt Permitted	0.07	1.00		0.11	1.00			0.92			0.93	1.00
Satd. Flow (perm)	102	3738		156	3739			1120			1270	1123
Volume (vph)	6	1609	14	33	1920	16	39	10	90	2	3	4
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	6	1676	15	34	2000	17	41	10	94	2	3	4
RTOR Reduction (vph)	0	1	0	0	1	0	0	14	0	0	0	3
Lane Group Flow (vph)	6	1690	0	34	2016	0	0	131	0	0	5	1
Confl. Peds. (#/hr)	30		38	38		30	24		15	15		24
Confl. Bikes (#/hr)			2			4			2			
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	65.3	65.3		65.3	65.3			16.7			16.7	16.7
Effective Green, g (s)	65.3	65.3		65.3	65.3			16.7			16.7	16.7
Actuated g/C Ratio	0.73	0.73		0.73	0.73			0.19			0.19	0.19
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	74	2712		113	2713			208			236	208
v/s Ratio Prot		0.45			c0.54							
v/s Ratio Perm	0.06			0.22				c0.12			0.00	0.00
v/c Ratio	0.08	0.62		0.30	0.74			0.63			0.02	0.00
Uniform Delay, d1	3.6	6.2		4.3	7.4			33.8			30.0	29.9
Progression Factor	2.62	3.01		0.85	0.76			1.00			1.00	1.00
Incremental Delay, d2	0.2	0.1		3.3	0.9			6.1			0.0	0.0
Delay (s)	9.6	18.7		7.0	6.5			39.9			30.0	29.9
Level of Service	A	B		A	A			D			C	C
Approach Delay (s)		18.7			6.5			39.9			29.9	
Approach LOS		B			A			D			C	

Intersection Summary

HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↓
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (prot)	3167	1417	1583	3167	3038	
Flt Permitted	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (perm)	3167	1417	1583	3167	3038	
Volume (vph)	1440	853	94	1467	437	66
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	1548	917	101	1577	470	71
RTOR Reduction (vph)	0	75	0	0	14	0
Lane Group Flow (vph)	1548	842	101	1577	527	0
Turn Type		pt+ov	Prot			
Protected Phases	2	2 4	1	6	4	
Permitted Phases						
Actuated Green, G (s)	40.6	73.9	9.0	37.1	29.4	
Effective Green, g (s)	40.5	73.5	8.5	37.0	29.0	
Actuated g/C Ratio	0.45	0.82	0.09	0.41	0.32	
Clearance Time (s)	3.9		3.5	3.9	3.6	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1425	1157	150	1302	979	
v/s Ratio Prot	c0.49	c0.59	c0.06	c0.50	0.17	
v/s Ratio Perm						
v/c Ratio	1.09	0.73	0.67	1.21	0.54	
Uniform Delay, d1	24.8	3.7	39.4	26.5	25.0	
Progression Factor	0.78	1.03	1.00	1.00	1.00	
Incremental Delay, d2	46.4	1.3	11.3	102.4	0.6	
Delay (s)	65.8	5.2	50.7	128.9	25.6	
Level of Service	E	A	D	F	C	
Approach Delay (s)	43.2			124.2	25.6	
Approach LOS	D			F	C	

Intersection Summary

HCM Average Control Delay	70.2	HCM Level of Service	E
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↗		↖	↕↕↗		↖	↕↕		↖	↕↗	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	3697		1304	3680		1304	2554		1302	2423	
Flt Permitted	0.14	1.00		0.14	1.00		0.13	1.00		0.18	1.00	
Satd. Flow (perm)	188	3697		188	3680		175	2554		245	2423	
Volume (vph)	129	1396	87	164	1600	69	252	766	79	95	732	291
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	133	1439	90	169	1649	71	260	790	81	98	755	300
RTOR Reduction (vph)	0	7	0	0	5	0	0	8	0	0	46	0
Lane Group Flow (vph)	133	1522	0	169	1715	0	260	863	0	98	1009	0
Conf. Peds. (#/hr)	106		44	44		106	78		51	51		78
Conf. Bikes (#/hr)			5			5			5			3
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	34.2	28.2		34.2	28.2		41.3	30.3		34.3	26.8	
Effective Green, g (s)	35.2	29.2		35.2	29.2		42.3	31.3		35.3	27.8	
Actuated g/C Ratio	0.39	0.32		0.39	0.32		0.47	0.35		0.39	0.31	
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	148	1199		148	1194		220	888		184	748	
v/s Ratio Prot	0.06	0.41		c0.08	c0.47		c0.14	0.34		0.04	c0.42	
v/s Ratio Perm	0.29			0.37			0.41			0.16		
v/c Ratio	0.90	1.27		1.14	1.44		1.18	0.97		0.53	1.35	
Uniform Delay, d1	23.9	30.4		24.9	30.4		24.2	28.9		19.1	31.1	
Progression Factor	1.24	0.90		1.43	0.85		1.35	1.39		1.00	1.00	
Incremental Delay, d2	35.8	126.0		103.3	199.4		109.9	19.0		2.9	165.7	
Delay (s)	65.3	153.2		139.0	225.3		142.5	59.1		22.0	196.8	
Level of Service	E	F		F	F		F	E		C	F	
Approach Delay (s)		146.2			217.5			78.3			181.9	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	163.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	127.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frbp, ped/bikes		0.98			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.92			0.98			1.00			1.00	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1497			1597			3140			3146	
Flt Permitted		0.93			0.80			0.84			0.93	
Satd. Flow (perm)		1405			1297			2656			2931	
Volume (vph)	24	68	129	45	135	40	48	1120	35	14	1054	28
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	26	73	139	48	145	43	52	1204	38	15	1133	30
RTOR Reduction (vph)	0	63	0	0	10	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	175	0	0	226	0	0	1292	0	0	1177	0
Conf. Peds. (#/hr)	10		8	8		10	19		14	14		19
Conf. Bikes (#/hr)			6			4			4			3
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		18.5			18.5			63.1			63.1	
Effective Green, g (s)		18.5			18.5			63.5			63.5	
Actuated g/C Ratio		0.21			0.21			0.71			0.71	
Clearance Time (s)		4.0			4.0			4.4			4.4	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		289			267			1874			2068	
v/s Ratio Prot												
v/s Ratio Perm		0.12			0.17			0.49			0.40	
v/c Ratio		0.61			0.85			0.69			0.57	
Uniform Delay, d1		32.4			34.4			7.6			6.5	
Progression Factor		1.00			1.00			1.00			0.73	
Incremental Delay, d2		3.6			21.0			2.1			0.1	
Delay (s)		36.0			55.4			9.7			4.9	
Level of Service		D			E			A			A	
Approach Delay (s)		36.0			55.4			9.7			4.9	
Approach LOS		D			E			A			A	
Intersection Summary												
HCM Average Control Delay			13.6				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			104.4%				ICU Level of Service				G	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑		↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00		0.91		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85		0.98		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	2608	1167		3679		1304	2608	1167	1304	2602	
Flt Permitted	0.07	1.00	1.00		1.00		0.15	1.00	1.00	0.16	1.00	
Satd. Flow (perm)	100	2608	1167		3679		208	2608	1167	221	2602	
Volume (vph)	35	1030	100	0	1652	229	82	990	103	185	1002	14
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	37	1084	105	0	1739	241	86	1042	108	195	1055	15
RTOR Reduction (vph)	0	0	30	0	15	0	0	0	24	0	1	0
Lane Group Flow (vph)	37	1084	75	0	1965	0	86	1042	84	195	1069	0
Turn Type	Perm		Perm		Perm		Perm		Perm	Perm		
Protected Phases	4		8		2		2		6			
Permitted Phases	4		4		2		2		6			
Actuated Green, G (s)	54.0	54.0	54.0		54.0		56.0	56.0	56.0	56.0	56.0	
Effective Green, g (s)	55.0	55.0	55.0		55.0		57.0	57.0	57.0	57.0	57.0	
Actuated g/C Ratio	0.46	0.46	0.46		0.46		0.48	0.48	0.48	0.48	0.48	
Clearance Time (s)	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	46	1195	535		1686		99	1239	554	105	1236	
v/s Ratio Prot	0.42		c0.53		0.40		0.41		0.07		c0.88	
v/s Ratio Perm	0.37		0.06		0.41		0.07		c0.88			
v/c Ratio	0.80	0.91	0.14		1.17		0.87	0.84	0.15	1.86	0.86	
Uniform Delay, d1	27.9	30.1	18.8		32.5		28.2	27.5	17.8	31.5	28.1	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	82.9	11.5	0.5		81.3		59.8	7.0	0.6	419.8	8.2	
Delay (s)	110.8	41.7	19.4		113.8		87.9	34.5	18.4	451.3	36.3	
Level of Service	F	D	B		F		F	C	B	F	D	
Approach Delay (s)	41.8		113.8		36.8		100.3					
Approach LOS	D		F		D		F					

Intersection Summary

HCM Average Control Delay	78.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	115.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘↗	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	3072	4550	1417	1583	3167	1417	1583	3167	1417
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1583	4550	1417	3072	4550	1417	1583	3167	1417	1583	3167	1417
Volume (vph)	152	1450	208	233	1900	208	532	1310	188	296	1151	130
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	155	1480	212	238	1939	212	543	1337	192	302	1174	133
RTOR Reduction (vph)	0	0	12	0	0	99	0	0	5	0	0	0
Lane Group Flow (vph)	155	1480	200	238	1939	113	543	1337	187	302	1174	133
Turn Type	Prot	pm+ov		Prot	Perm		Prot	pm+ov		Prot	pm+ov	
Protected Phases	3	8	1	7	4		1	6	7	5	2	3
Permitted Phases		8			4			6			2	
Actuated Green, G (s)	13.0	37.5	50.5	12.5	37.0	37.0	13.0	37.0	49.5	13.0	37.0	50.0
Effective Green, g (s)	13.0	39.5	52.5	12.5	39.0	39.0	13.0	39.0	51.5	13.0	39.0	52.0
Actuated g/C Ratio	0.11	0.33	0.44	0.10	0.32	0.32	0.11	0.32	0.43	0.11	0.32	0.43
Clearance Time (s)	4.0	6.0	4.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0
Vehicle Extension (s)	3.0	4.7	3.0	3.0	5.0	5.0	3.0	4.5	3.0	3.0	4.6	3.0
Lane Grp Cap (vph)	171	1498	667	320	1479	461	171	1029	655	171	1029	661
v/s Ratio Prot	c0.10	0.33	0.03	0.08	c0.43		c0.34	c0.42	0.03	0.19	0.37	0.02
v/s Ratio Perm			0.11			0.08			0.10			0.07
v/c Ratio	0.91	0.99	0.30	0.74	1.31	0.25	3.18	1.30	0.29	1.77	1.14	0.20
Uniform Delay, d1	52.9	40.0	21.9	52.2	40.5	29.7	53.5	40.5	22.3	53.5	40.5	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	42.6	20.3	0.3	9.0	144.9	0.6	994.1	141.9	0.2	367.5	75.3	0.2
Delay (s)	95.5	60.3	22.1	61.2	185.4	30.3	1047.6	182.4	22.5	421.0	115.8	21.3
Level of Service	F	E	C	E	F	C	F	F	C	F	F	C
Approach Delay (s)		58.9		159.3			394.3			165.3		
Approach LOS		E		F			F			F		

Intersection Summary

HCM Average Control Delay	198.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.49		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	132.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.98		1.00	0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	3107		1583	3074		1583	4488		1583	3167	1417
Flt Permitted	0.17	1.00		0.17	1.00		0.11	1.00		0.13	1.00	1.00
Satd. Flow (perm)	286	3107		286	3074		181	4488		211	3167	1417
Volume (vph)	162	1026	148	230	857	207	317	1165	117	86	1107	161
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	164	1036	149	232	866	209	320	1177	118	87	1118	163
RTOR Reduction (vph)	0	13	0	0	24	0	0	12	0	0	0	12
Lane Group Flow (vph)	164	1172	0	232	1051	0	320	1283	0	87	1118	151
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		pm+ov
Protected Phases	1	6		5	2		3	8		7	4	1
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	30.8	22.3		30.8	22.3		44.3	35.8		40.1	33.7	42.2
Effective Green, g (s)	31.3	23.3		31.3	23.3		44.8	36.8		40.6	34.7	42.7
Actuated g/C Ratio	0.35	0.26		0.35	0.26		0.50	0.41		0.45	0.39	0.47
Clearance Time (s)	3.5	5.0		3.5	5.0		3.5	5.0		3.5	5.0	3.5
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	4.3		3.0	4.6	3.0
Lane Grp Cap (vph)	215	804		215	796		215	1835		185	1221	735
v/s Ratio Prot	0.07	c0.38		c0.10	0.34		c0.13	0.29		0.03	0.35	0.02
v/s Ratio Perm	0.20			0.28			c0.61			0.18		0.09
v/c Ratio	0.76	1.46		1.08	1.32		1.49	0.70		0.47	0.92	0.21
Uniform Delay, d1	41.7	33.4		43.2	33.4		22.0	22.0		15.6	26.3	13.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	14.8	213.1		84.0	153.1		242.9	1.3		1.9	11.1	0.1
Delay (s)	56.4	246.4		127.2	186.4		264.9	23.3		17.5	37.4	13.9
Level of Service	E	F		F	F		F	C		B	D	B
Approach Delay (s)		223.3			175.9			71.2			33.3	
Approach LOS		F			F			E			C	

Intersection Summary

HCM Average Control Delay	122.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	118.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1583	3158		1583	3151			1615			1609	
Flt Permitted	0.14	1.00		0.21	1.00			0.95			0.95	
Satd. Flow (perm)	228	3158		344	3151			1547			1530	
Volume (vph)	29	939	17	94	1468	50	11	86	24	62	308	99
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	30	968	18	97	1513	52	11	89	25	64	318	102
RTOR Reduction (vph)	0	2	0	0	4	0	0	16	0	0	4	0
Lane Group Flow (vph)	30	984	0	97	1561	0	0	110	0	0	480	0
Turn Type	Perm		Perm		Perm			Perm				
Protected Phases	6		2		8			4				
Permitted Phases	6		2		8			4				
Actuated Green, G (s)	28.9	28.9		28.9	28.9			21.9			21.9	
Effective Green, g (s)	29.2	29.2		29.2	29.2			22.8			22.8	
Actuated g/C Ratio	0.49	0.49		0.49	0.49			0.38			0.38	
Clearance Time (s)	4.3	4.3		4.3	4.3			4.9			4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	111	1537		167	1533			588			581	
v/s Ratio Prot		0.31		c0.50								
v/s Ratio Perm	0.13			0.28				0.07			c0.31	
v/c Ratio	0.27	0.64		0.58	1.02			0.19			0.83	
Uniform Delay, d1	9.1	11.5		11.0	15.4			12.4			16.8	
Progression Factor	0.78	0.72		1.00	1.00			1.00			1.00	
Incremental Delay, d2	5.4	1.9		13.9	27.7			0.2			9.4	
Delay (s)	12.5	10.1		24.9	43.1			12.6			26.2	
Level of Service	B	B		C	D			B			C	
Approach Delay (s)		10.2			42.1			12.6			26.2	
Approach LOS		B			D			B			C	

Intersection Summary

HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)					4.0			4.0		4.0	4.0	
Lane Util. Factor					1.00			0.95		1.00	0.95	
Frbp, ped/bikes					1.00			1.00		1.00	1.00	
Flpb, ped/bikes					1.00			1.00		1.00	1.00	
Frt					0.95			1.00		1.00	1.00	
Flt Protected					0.97			1.00		0.95	1.00	
Satd. Flow (prot)					1531			3147		1583	3167	
Flt Permitted					0.81			1.00		0.15	1.00	
Satd. Flow (perm)					1285			3147		244	3167	
Volume (vph)	0	0	0	149	0	98	0	1182	27	79	2049	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	159	0	104	0	1257	29	84	2180	0
RTOR Reduction (vph)	0	0	0	0	23	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	240	0	0	1284	0	84	2180	0
Conf. Peds. (#/hr)							10		32	32		10
Conf. Bikes (#/hr)			1						2			4
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)					30.5			61.0		61.0	61.0	
Effective Green, g (s)					31.0			61.0		61.0	61.0	
Actuated g/C Ratio					0.31			0.61		0.61	0.61	
Clearance Time (s)					4.5			4.0		4.0	4.0	
Vehicle Extension (s)					3.0			5.0		5.0	5.0	
Lane Grp Cap (vph)					398			1920		149	1932	
v/s Ratio Prot								0.41			c0.69	
v/s Ratio Perm					c0.19					0.34		
v/c Ratio					0.60			0.67		0.56	1.13	
Uniform Delay, d1					29.3			12.8		11.6	19.5	
Progression Factor					1.00			1.00		1.00	1.00	
Incremental Delay, d2					6.6			1.9		14.5	65.0	
Delay (s)					35.9			14.7		26.1	84.5	
Level of Service					D			B		C	F	
Approach Delay (s)		0.0			35.9			14.7			82.4	
Approach LOS		A			D			B			F	
Intersection Summary												
HCM Average Control Delay			56.3									HCM Level of Service E
HCM Volume to Capacity ratio			0.95									
Actuated Cycle Length (s)			100.0									Sum of lost time (s) 8.0
Intersection Capacity Utilization			96.0%									ICU Level of Service F
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↔↔	↑↑		↗	↑↑	↗	↗	↑↑↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00	1.00	0.91	
Frbp, ped/bikes	1.00	1.00	0.94	1.00	1.00		1.00	1.00	0.95	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3072	3167	1325	3072	3147		1583	3167	1352	1583	4427	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.09	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3072	3167	1325	3072	3147		155	3167	1352	171	4427	
Volume (vph)	83	581	76	370	1197	28	99	1152	335	19	1894	215
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	86	599	78	381	1234	29	102	1188	345	20	1953	222
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	90	0	11	0
Lane Group Flow (vph)	86	599	78	381	1262	0	102	1188	255	20	2164	0
Conf. Peds. (#/hr)	73		41	41		73	67		26	26		67
Conf. Bikes (#/hr)			3			4			1			4
Turn Type	Prot		pm+ov	Prot			pm+pt		pm+ov		pm+pt	
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases			2				8		8		4	
Actuated Green, G (s)	6.4	48.8	55.8	8.0	50.4		48.5	41.7	49.7	40.3	37.5	
Effective Green, g (s)	6.4	50.1	57.1	8.0	51.7		49.9	43.1	51.1	41.7	38.9	
Actuated g/C Ratio	0.05	0.42	0.48	0.07	0.43		0.42	0.36	0.43	0.35	0.32	
Clearance Time (s)	4.0	5.3	4.0	4.0	5.3		4.0	5.4	4.0	4.0	5.4	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	164	1322	675	205	1356		148	1137	621	92	1435	
v/s Ratio Prot	0.03	c0.19	0.01	c0.12	c0.40		c0.04	0.38	0.03	0.01	c0.49	
v/s Ratio Perm			0.05				0.25		0.16	0.07		
v/c Ratio	0.52	0.45	0.12	1.86	0.93		0.69	1.04	0.41	0.22	1.51	
Uniform Delay, d1	55.3	25.1	17.4	56.0	32.4		56.9	38.5	24.0	30.4	40.5	
Progression Factor	0.79	0.49	0.49	0.94	1.26		1.27	1.31	2.41	1.00	1.00	
Incremental Delay, d2	2.7	1.0	0.1	390.9	3.9		5.9	30.9	0.2	1.2	232.1	
Delay (s)	46.3	13.3	8.7	443.4	44.9		78.1	81.3	58.0	31.6	272.7	
Level of Service	D	B	A	F	D		E	F	E	C	F	
Approach Delay (s)		16.5			137.2			76.2			270.5	
Approach LOS		B			F			E			F	

Intersection Summary

HCM Average Control Delay	153.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗		↘	↗↗	↘	↘	↗↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3167	1417	1583	3100		1583	3167	1417	1583	3084	
Flt Permitted	0.07	1.00	1.00	0.33	1.00		0.13	1.00	1.00	0.27	1.00	
Satd. Flow (perm)	120	3167	1417	544	3100		222	3167	1417	442	3084	
Volume (vph)	64	618	252	217	1092	178	235	730	43	161	867	183
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	67	651	265	228	1149	187	247	768	45	169	913	193
RTOR Reduction (vph)	0	0	42	0	11	0	0	0	24	0	15	0
Lane Group Flow (vph)	67	651	223	228	1325	0	247	768	21	169	1091	0
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6		6	2			8		8		4	
Actuated Green, G (s)	54.6	54.6	54.6	54.6	54.6		54.0	54.0	54.0	54.0	54.0	
Effective Green, g (s)	56.5	56.5	56.5	56.5	56.5		55.5	55.5	55.5	55.5	55.5	
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.47		0.46	0.46	0.46	0.46	0.46	
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9		5.5	5.5	5.5	5.5	5.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	57	1491	667	256	1460		103	1465	655	204	1426	
v/s Ratio Prot		0.21			0.43			0.24			0.35	
v/s Ratio Perm	c0.56		0.16	0.42			c1.11		0.01	0.38		
v/c Ratio	1.18	0.44	0.33	0.89	0.91		2.40	0.52	0.03	0.83	0.77	
Uniform Delay, d1	31.8	21.1	19.9	28.9	29.3		32.2	22.9	17.6	28.1	26.8	
Progression Factor	1.19	1.14	1.22	1.07	1.05		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	162.8	0.8	1.1	11.6	2.8		657.8	1.3	0.1	30.5	4.0	
Delay (s)	200.6	24.9	25.4	42.7	33.6		690.0	24.2	17.7	58.6	30.8	
Level of Service	F	C	C	D	C		F	C	B	E	C	
Approach Delay (s)		37.0			34.9			179.1			34.5	
Approach LOS		D			C			F			C	

Intersection Summary

HCM Average Control Delay	66.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	109.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↖	↗	↖	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3112		1583	3078		1583	1667	1417	1583	1598	
Flt Permitted	0.20	1.00		0.20	1.00		0.13	1.00	1.00	0.39	1.00	
Satd. Flow (perm)	327	3112		338	3078		214	1667	1417	642	1598	
Volume (vph)	52	664	86	86	1231	281	55	448	92	58	552	209
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	722	93	93	1338	305	60	487	100	63	600	227
RTOR Reduction (vph)	0	17	0	0	33	0	0	0	25	0	2	0
Lane Group Flow (vph)	57	799	0	93	1610	0	60	487	75	63	825	0
Turn Type	Perm			Perm			Perm			Perm	Perm	
Protected Phases	6			2			8			8	4	
Permitted Phases	6			2			8			8	4	
Actuated Green, G (s)	20.1	20.1		20.1	20.1		31.0	31.0	31.0	31.0	31.0	
Effective Green, g (s)	20.4	20.4		20.4	20.4		31.6	31.6	31.6	31.6	31.6	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.53	0.53	0.53	0.53	0.53	
Clearance Time (s)	4.3	4.3		4.3	4.3		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	1058		115	1047		113	878	746	338	842	
v/s Ratio Prot		0.26			c0.52			0.29			c0.52	
v/s Ratio Perm	0.17			0.28			0.28		0.05	0.10		
v/c Ratio	0.51	0.75		0.81	1.54		0.53	0.55	0.10	0.19	0.98	
Uniform Delay, d1	15.8	17.6		18.0	19.8		9.3	9.5	7.1	7.5	13.9	
Progression Factor	1.00	1.00		0.95	0.97		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	16.0	5.0		5.6	242.4		16.7	2.5	0.3	1.2	26.4	
Delay (s)	31.8	22.6		22.7	261.6		26.0	12.0	7.4	8.7	40.3	
Level of Service	C	C		C	F		C	B	A	A	D	
Approach Delay (s)		23.2			248.8			12.6			38.0	
Approach LOS		C			F			B			D	

Intersection Summary

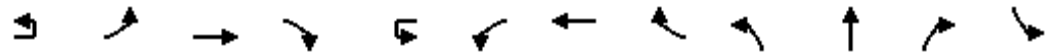
HCM Average Control Delay	119.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	120.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1558	1666		1583	1635			1642			1611	
Flt Permitted	0.28	1.00		0.14	1.00			0.93			0.91	
Satd. Flow (perm)	454	1666		230	1635			1527			1478	
Volume (vph)	244	931	2	23	510	46	69	680	41	28	312	72
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	257	980	2	24	537	48	73	716	43	29	328	76
RTOR Reduction (vph)	0	0	0	0	5	0	0	3	0	0	13	0
Lane Group Flow (vph)	257	982	0	24	580	0	0	829	0	0	420	0
Conf. Peds. (#/hr)	28		25	25		28	21		28	28		21
Conf. Bikes (#/hr)			13			10			6			3
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)	29.0	29.0		29.0	29.0			23.0			23.0	
Effective Green, g (s)	29.0	29.0		29.0	29.0			23.0			23.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.38			0.38	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	219	805		111	790			585			567	
v/s Ratio Prot		c0.59			0.35							
v/s Ratio Perm	0.57			0.10				c0.54			0.28	
v/c Ratio	1.17	1.22		0.22	0.73			1.42			0.74	
Uniform Delay, d1	15.5	15.5		8.9	12.4			18.5			15.9	
Progression Factor	1.00	1.00		0.68	0.77			2.16			1.00	
Incremental Delay, d2	115.6	110.1		1.2	1.7			193.7			8.5	
Delay (s)	131.1	125.6		7.3	11.3			233.6			24.4	
Level of Service	F	F		A	B			F			C	
Approach Delay (s)		126.7			11.1			233.6			24.4	
Approach LOS		F			B			F			C	

Intersection Summary

HCM Average Control Delay	118.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	138.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔	↔↔↔	↔		↔	↔↔↔	↔	↔	↔	↔	↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		1.00	0.91	1.00		1.00	0.91	1.00	1.00	1.00		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1583	4550	1417		1583	4550	1417	1583	1662		1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.53	1.00		0.12
Satd. Flow (perm)		1583	4550	1417		1583	4550	1417	888	1662		205
Volume (vph)	35	121	2399	16	3	93	2089	205	17	487	10	164
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	36	125	2473	16	3	96	2154	211	18	502	10	169
RTOR Reduction (vph)	0	0	0	5	0	0	0	93	0	1	0	0
Lane Group Flow (vph)	0	161	2473	11	0	99	2154	118	18	511	0	169
Turn Type	Prot	Prot		Perm	Prot	Prot		pm+ov	pm+pt			pm+pt
Protected Phases	1	1	6		5	5	2	7	3	8		7
Permitted Phases				6				2	8			4
Actuated Green, G (s)		16.1	40.7	40.7		11.3	35.9	47.6	40.1	37.3		53.0
Effective Green, g (s)		16.1	41.7	41.7		11.3	36.9	48.6	42.1	39.3		55.0
Actuated g/C Ratio		0.13	0.35	0.35		0.09	0.31	0.41	0.35	0.33		0.46
Clearance Time (s)		4.0	5.0	5.0		4.0	5.0	4.0	4.0	6.0		4.0
Vehicle Extension (s)		3.0	4.4	4.4		3.0	4.3	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		212	1581	492		149	1399	621	328	544		228
v/s Ratio Prot		c0.10	c0.54			0.06	0.47	0.02	0.00	c0.31		c0.07
v/s Ratio Perm				0.01				0.06	0.02			0.27
v/c Ratio		0.76	1.56	0.02		0.66	1.54	0.19	0.05	0.94		0.74
Uniform Delay, d1		50.1	39.1	25.7		52.5	41.5	23.0	25.6	39.2		25.2
Progression Factor		1.00	1.00	1.00		1.50	0.38	0.73	1.00	1.00		1.22
Incremental Delay, d2		14.4	257.0	0.1		1.0	243.2	0.0	0.1	24.2		10.7
Delay (s)		64.5	296.2	25.8		79.6	258.9	16.8	25.7	63.4		41.3
Level of Service		E	F	C		E	F	B	C	E		D
Approach Delay (s)			280.5				230.9			62.2		
Approach LOS			F				F			E		

Intersection Summary			
HCM Average Control Delay	222.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	110.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations	↱	
Ideal Flow (vphpl)	1700	1700
Total Lost time (s)	4.0	
Lane Util. Factor	1.00	
Frt	0.97	
Flt Protected	1.00	
Satd. Flow (prot)	1623	
Flt Permitted	1.00	
Satd. Flow (perm)	1623	
Volume (vph)	253	54
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	261	56
RTOR Reduction (vph)	5	0
Lane Group Flow (vph)	312	0
Turn Type		
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	46.2	
Effective Green, g (s)	48.2	
Actuated g/C Ratio	0.40	
Clearance Time (s)	6.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	652	
v/s Ratio Prot	0.19	
v/s Ratio Perm		
v/c Ratio	0.48	
Uniform Delay, d1	26.6	
Progression Factor	1.06	
Incremental Delay, d2	0.5	
Delay (s)	28.7	
Level of Service	C	
Approach Delay (s)	33.1	
Approach LOS	C	

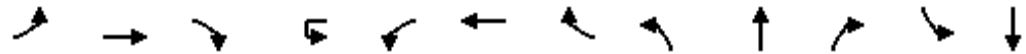
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔		↔	↕		↔	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1572	1641		1583	1633		1583	3032		1583	3081	
Flt Permitted	0.33	1.00		0.08	1.00		0.12	1.00		0.12	1.00	
Satd. Flow (perm)	549	1641		133	1633		208	3032		208	3081	
Volume (vph)	269	946	82	89	478	53	311	887	229	19	1245	185
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	280	985	85	93	498	55	324	924	239	20	1297	193
RTOR Reduction (vph)	0	3	0	0	4	0	0	26	0	0	13	0
Lane Group Flow (vph)	280	1067	0	93	549	0	324	1137	0	20	1477	0
Conf. Peds. (#/hr)	18		24	24		18	27		25	25		27
Conf. Bikes (#/hr)			5			42			5			2
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	49.0	49.0		49.0	49.0		31.1	31.1		31.1	31.1	
Effective Green, g (s)	50.0	50.0		50.0	50.0		32.0	32.0		32.0	32.0	
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.36	0.36		0.36	0.36	
Clearance Time (s)	5.0	5.0		5.0	5.0		4.9	4.9		4.9	4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	305	912		74	907		74	1078		74	1095	
v/s Ratio Prot		0.65			0.34			0.38			0.48	
v/s Ratio Perm	0.51			c0.70			c1.56			0.10		
v/c Ratio	0.92	1.17		1.26	0.60		4.38	1.05		0.27	1.35	
Uniform Delay, d1	18.1	20.0		20.0	13.4		29.0	29.0		20.7	29.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	34.3	88.4		188.5	3.0		1551.2	43.1		8.8	163.1	
Delay (s)	52.4	108.4		208.5	16.4		1580.2	72.1		29.5	192.1	
Level of Service	D	F		F	B		F	E		C	F	
Approach Delay (s)		96.8			44.0			400.7			190.0	
Approach LOS		F			D			F			F	

Intersection Summary

HCM Average Control Delay	208.7	HCM Level of Service	F
HCM Volume to Capacity ratio	2.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	147.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗		↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1583	4550	1417		1583	4550	1417	1583	3167	1417	1583	3167
Flt Permitted	0.95	1.00	1.00		0.95	1.00	1.00	0.09	1.00	1.00	0.23	1.00
Satd. Flow (perm)	1583	4550	1417		1583	4550	1417	151	3167	1417	387	3167
Volume (vph)	97	2269	201	10	75	1623	410	148	798	123	10	999
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	100	2339	207	10	77	1673	423	153	823	127	10	1030
RTOR Reduction (vph)	0	0	16	0	0	0	102	0	0	76	0	0
Lane Group Flow (vph)	100	2339	191	0	87	1673	321	153	823	51	10	1030
Turn Type	Prot		pm+ov	Prot	Prot		Perm	pm+pt		Perm	pm+pt	
Protected Phases	1	6	3	5	5	2		3	8		7	4
Permitted Phases			6				2	8		8		4
Actuated Green, G (s)	6.0	41.5	46.5		5.0	40.5	40.5	47.0	42.0	42.0	39.0	38.0
Effective Green, g (s)	6.0	42.8	48.8		5.0	41.8	41.8	50.2	44.2	44.2	42.2	40.2
Actuated g/C Ratio	0.05	0.39	0.44		0.05	0.38	0.38	0.46	0.40	0.40	0.38	0.37
Clearance Time (s)	4.0	5.3	5.0		4.0	5.3	5.3	5.0	6.2	6.2	5.0	6.2
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	4.2	4.2	3.0	3.6
Lane Grp Cap (vph)	86	1770	680		72	1729	538	147	1273	569	170	1157
v/s Ratio Prot	0.06	c0.51	0.02		0.05	c0.37		c0.06	0.26		0.00	0.33
v/s Ratio Perm			0.12				0.23	c0.42		0.04	0.02	
v/c Ratio	1.16	1.32	0.28		1.21	0.97	0.60	1.04	0.65	0.09	0.06	0.89
Uniform Delay, d1	52.0	33.6	19.5		52.5	33.4	27.3	24.4	26.6	20.4	21.8	32.8
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	147.5	148.7	0.2		172.5	15.2	4.8	85.5	1.3	0.1	0.1	9.0
Delay (s)	199.5	182.3	19.7		225.0	48.7	32.2	109.8	27.9	20.5	21.9	41.8
Level of Service	F	F	B		F	D	C	F	C	C	C	D
Approach Delay (s)		170.3				52.5			38.4			40.4
Approach LOS		F				D			D			D

Intersection Summary

HCM Average Control Delay	92.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	7
Ideal Flow (vphpl)	1700
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1417
Flt Permitted	1.00
Satd. Flow (perm)	1417
Volume (vph)	58
Peak-hour factor, PHF	0.97
Adj. Flow (vph)	60
RTOR Reduction (vph)	10
Lane Group Flow (vph)	50
Turn Type	pm+ov
Protected Phases	1
Permitted Phases	4
Actuated Green, G (s)	44.0
Effective Green, g (s)	46.2
Actuated g/C Ratio	0.42
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	595
v/s Ratio Prot	0.00
v/s Ratio Perm	0.03
v/c Ratio	0.08
Uniform Delay, d1	19.2
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	19.2
Level of Service	B
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑			↑↑↑	↔	↔	↔↔↔	↔			
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.91			0.86	1.00	0.86	0.81	0.86			
Frt	1.00	1.00			1.00	0.85	1.00	0.95	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.98	1.00			
Satd. Flow (prot)	3072	4550			5733	1417	1362	3773	1218			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.98	1.00			
Satd. Flow (perm)	3072	4550			5733	1417	1362	3773	1218			
Volume (vph)	579	1931	0	0	1611	272	874	296	733	0	0	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	591	1970	0	0	1644	278	892	302	748	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	137	0	10	10	0	0	0
Lane Group Flow (vph)	591	1970	0	0	1644	141	446	1112	364	0	0	0
Turn Type	Prot				Perm		Split	Perm				
Protected Phases	1	6			2		4	4				
Permitted Phases					2						4	
Actuated Green, G (s)	36.0	74.0			34.0	34.0	35.2	35.2	35.2			
Effective Green, g (s)	36.0	75.0			35.0	35.0	37.0	37.0	37.0			
Actuated g/C Ratio	0.30	0.62			0.29	0.29	0.31	0.31	0.31			
Clearance Time (s)	4.0	5.0			5.0	5.0	5.8	5.8	5.8			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	922	2844			1672	413	420	1163	376			
v/s Ratio Prot	0.19	c0.43			c0.29		c0.33	0.29				
v/s Ratio Perm					0.10						0.30	
v/c Ratio	0.64	0.69			0.98	0.34	1.06	0.98dl	0.97			
Uniform Delay, d1	36.4	14.9			42.2	33.4	41.5	40.7	40.9			
Progression Factor	0.87	0.99			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	0.1	0.1			18.4	2.2	61.3	16.7	37.4			
Delay (s)	31.9	14.9			60.6	35.7	102.8	57.4	78.3			
Level of Service	C	B			E	D	F	E	E			
Approach Delay (s)	18.8				57.0		71.9				0.0	
Approach LOS	B				E		E				A	

Intersection Summary

HCM Average Control Delay	46.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	118.7%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑		↔↔	↑↑↑					↔	↔↔	↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.81		0.97	0.91					0.91	0.86	0.91
Fr _t		0.96		1.00	1.00					1.00	0.97	0.85
Fl _t Protected		1.00		0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6503		3072	4550					1441	2714	1289
Fl _t Permitted		1.00		0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6503		3072	4550					1441	2714	1289
Volume (vph)	0	1449	467	679	1800	0	0	0	0	1076	283	653
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1479	477	693	1837	0	0	0	0	1098	289	666
RTOR Reduction (vph)	0	49	0	0	0	0	0	0	0	0	14	15
Lane Group Flow (vph)	0	1907	0	693	1837	0	0	0	0	549	1017	458
Turn Type				Prot						Split		Perm
Protected Phases		2		1	6					4	4	
Permitted Phases												4
Actuated Green, G (s)		40.3		30.5	75.3					35.0	35.0	35.0
Effective Green, g (s)		41.0		31.0	76.0					36.0	36.0	36.0
Actuated g/C Ratio		0.34		0.26	0.63					0.30	0.30	0.30
Clearance Time (s)		4.7		4.5	4.7					5.0	5.0	5.0
Vehicle Extension (s)		3.0		4.0	3.0					4.0	4.0	4.0
Lane Grp Cap (vph)		2222		794	2882					432	814	387
v/s Ratio Prot		c0.29		c0.23	0.40					c0.38	0.37	
v/s Ratio Perm												0.36
v/c Ratio		0.88dr		0.87	0.64					1.27	1.25	1.18
Uniform Delay, d ₁		36.8		42.6	13.5					42.0	42.0	42.0
Progression Factor		1.00		0.89	0.49					1.00	1.00	1.00
Incremental Delay, d ₂		4.6		2.9	0.3					139.0	122.4	106.2
Delay (s)		41.4		40.8	6.9					181.0	164.4	148.2
Level of Service		D		D	A					F	F	F
Approach Delay (s)		41.4			16.2			0.0			165.1	
Approach LOS		D			B			A			F	

Intersection Summary

HCM Average Control Delay	70.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	118.7%	ICU Level of Service	H
Analysis Period (min)	15		
dr Defacto Right Lane. Recode with 1 though lane as a right lane.			
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	0.99		1.00	1.00			0.98			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.99			0.94			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1569	1611		1583	1645			1524			1619	
Flt Permitted	0.26	1.00		0.12	1.00			0.97			0.87	
Satd. Flow (perm)	422	1611		208	1645			1480			1422	
Volume (vph)	47	971	174	287	624	37	58	292	323	17	72	10
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	47	971	174	287	624	37	58	292	323	17	72	10
RTOR Reduction (vph)	0	11	0	0	4	0	0	55	0	0	7	0
Lane Group Flow (vph)	47	1134	0	287	657	0	0	618	0	0	92	0
Conf. Peds. (#/hr)	19		23	23		19	17		16	16		17
Conf. Bikes (#/hr)			9			39			2			10
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	6		2		2		8		8		4	
Permitted Phases	6		2		2		8		8		4	
Actuated Green, G (s)	32.0	32.0		32.0	32.0			20.0			20.0	
Effective Green, g (s)	32.0	32.0		32.0	32.0			20.0			20.0	
Actuated g/C Ratio	0.53	0.53		0.53	0.53			0.33			0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	225	859		111	877			493			474	
v/s Ratio Prot		0.70			0.40							
v/s Ratio Perm	0.11			c1.38				c0.42			0.06	
v/c Ratio	0.21	1.32		2.59	0.75			1.25			0.19	
Uniform Delay, d1	7.4	14.0		14.0	10.9			20.0			14.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	2.1	152.4		739.0	5.8			129.7			0.2	
Delay (s)	9.5	166.4		753.0	16.7			149.7			14.5	
Level of Service	A	F		F	B			F			B	
Approach Delay (s)		160.2			239.6			149.7			14.5	
Approach LOS		F			F			F			B	

Intersection Summary

HCM Average Control Delay	178.7	HCM Level of Service	F
HCM Volume to Capacity ratio	2.07		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	147.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4538		1583	4510		1583	1613		1583	1605	
Flt Permitted	0.06	1.00		0.12	1.00		0.33	1.00		0.52	1.00	
Satd. Flow (perm)	99	4538		202	4510		556	1613		869	1605	
Volume (vph)	74	1448	25	27	1836	113	106	124	34	172	191	63
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	80	1574	27	29	1996	123	115	135	37	187	208	68
RTOR Reduction (vph)	0	1	0	0	4	0	0	9	0	0	8	0
Lane Group Flow (vph)	80	1600	0	29	2115	0	115	163	0	187	268	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			2			4			4		
Permitted Phases	2			2			4			4		
Actuated Green, G (s)	82.8	82.8		82.8	82.8		27.8	27.8		27.8	27.8	
Effective Green, g (s)	83.2	83.2		83.2	83.2		28.8	28.8		28.8	28.8	
Actuated g/C Ratio	0.69	0.69		0.69	0.69		0.24	0.24		0.24	0.24	
Clearance Time (s)	4.4	4.4		4.4	4.4		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	69	3146		140	3127		133	387		209	385	
v/s Ratio Prot		0.35			0.47			0.10			0.17	
v/s Ratio Perm	c0.81			0.14			0.21			c0.22		
v/c Ratio	1.16	0.51		0.21	0.68		0.86	0.42		0.89	0.70	
Uniform Delay, d1	18.4	8.7		6.6	10.6		43.7	38.5		44.1	41.6	
Progression Factor	1.22	0.54		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	105.0	0.2		3.3	1.2		40.4	0.7		34.8	5.4	
Delay (s)	127.4	4.8		9.9	11.8		84.1	39.3		78.9	47.0	
Level of Service	F	A		A	B		F	D		E	D	
Approach Delay (s)		10.7			11.8			57.2			59.9	
Approach LOS		B			B			E			E	

Intersection Summary

HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑	↗	↖↗	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1583	4550	3167	1417	3072	1417
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1583	4550	3167	1417	3072	1417
Volume (vph)	275	1513	1189	715	778	288
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	296	1627	1278	769	837	310
RTOR Reduction (vph)	0	0	0	15	0	8
Lane Group Flow (vph)	296	1627	1278	754	837	302
Turn Type	Prot			pm+ov		pt+ov
Protected Phases	5	2	6	4	4	4 5
Permitted Phases				6		
Actuated Green, G (s)	12.5	40.6	37.1	66.5	29.4	45.5
Effective Green, g (s)	12.0	40.5	37.0	66.0	29.0	45.0
Actuated g/C Ratio	0.13	0.45	0.41	0.73	0.32	0.50
Clearance Time (s)	3.5	3.9	3.9	3.6	3.6	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	211	2048	1302	1102	990	709
v/s Ratio Prot	c0.19	c0.36	c0.40	0.22	c0.27	0.21
v/s Ratio Perm				0.31		
v/c Ratio	1.40	0.79	0.98	0.68	0.85	0.43
Uniform Delay, d1	39.0	21.2	26.2	6.4	28.4	14.3
Progression Factor	1.00	1.00	0.61	0.41	1.00	1.00
Incremental Delay, d2	207.3	3.3	4.3	0.2	6.7	0.4
Delay (s)	246.3	24.5	20.2	2.8	35.2	14.7
Level of Service	F	C	C	A	D	B
Approach Delay (s)		58.6	13.7		29.6	
Approach LOS		E	B		C	

Intersection Summary

HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↑↑	↗		↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95	1.00		0.95	1.00
Frt	1.00	0.98		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.99	1.00
Satd. Flow (prot)	1583	4440		1583	4493			3137	1417		3148	1417
Flt Permitted	0.12	1.00		0.95	1.00			0.55	1.00		0.51	1.00
Satd. Flow (perm)	199	4440		1583	4493			1726	1417		1619	1417
Volume (vph)	450	1403	271	67	1410	128	216	940	133	99	731	98
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	474	1477	285	71	1484	135	227	989	140	104	769	103
RTOR Reduction (vph)	0	31	0	0	12	0	0	0	87	0	0	16
Lane Group Flow (vph)	474	1731	0	71	1607	0	0	1216	53	0	873	87
Turn Type	Perm			Prot			Perm		Perm	Perm		Perm
Protected Phases		6		5	2			8			4	
Permitted Phases	6						8		8	4		4
Actuated Green, G (s)	37.6	37.6		6.4	48.0			33.5	33.5		33.5	33.5
Effective Green, g (s)	37.6	37.6		6.4	48.0			34.0	34.0		34.0	34.0
Actuated g/C Ratio	0.42	0.42		0.07	0.53			0.38	0.38		0.38	0.38
Clearance Time (s)	4.0	4.0		4.0	4.0			4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	83	1855		113	2396			652	535		612	535
v/s Ratio Prot		0.39		0.04	c0.36							
v/s Ratio Perm	c2.39							c0.70	0.04		0.54	0.06
v/c Ratio	5.71	0.93		0.63	0.67			2.01dl	0.10		1.43	0.16
Uniform Delay, d1	26.2	25.0		40.6	15.3			28.0	18.1		28.0	18.6
Progression Factor	1.46	1.48		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	2134.3	6.2		10.4	1.5			395.1	0.4		201.3	0.7
Delay (s)	2172.6	43.2		51.1	16.8			423.1	18.5		229.3	19.2
Level of Service	F	D		D	B			F	B		F	B
Approach Delay (s)		494.6			18.2			381.3			207.1	
Approach LOS		F			B			F			F	

Intersection Summary

HCM Average Control Delay	296.6	HCM Level of Service	F
HCM Volume to Capacity ratio	3.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	136.7%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
2: 6th St & Western Ave

2/23/2010

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕			↕↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0			4.0			4.0	4.0
Lane Util. Factor		0.95			0.95			0.95			0.95	1.00
Frbp, ped/bikes		0.99			0.96			0.99			1.00	0.75
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		0.99			0.98			0.99			1.00	0.85
Flt Protected		1.00			1.00			1.00			1.00	1.00
Satd. Flow (prot)		3115			2973			3108			3167	1066
Flt Permitted		1.00			1.00			1.00			1.00	1.00
Satd. Flow (perm)		3115			2973			3108			3167	1066
Volume (vph)	0	1213	78	0	1183	184	0	1539	97	0	1736	116
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	1264	81	0	1232	192	0	1603	101	0	1808	121
RTOR Reduction (vph)	0	1	0	0	2	0	0	5	0	0	0	7
Lane Group Flow (vph)	0	1344	0	0	1422	0	0	1699	0	0	1808	114
Conf. Peds. (#/hr)	136		73	73		136	120		104	120		104
Conf. Bikes (#/hr)			5			7			19			15
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)		40.2			40.2			40.2			40.2	40.2
Effective Green, g (s)		41.0			41.0			41.0			41.0	41.0
Actuated g/C Ratio		0.46			0.46			0.46			0.46	0.46
Clearance Time (s)		4.8			4.8			4.8			4.8	4.8
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1419			1354			1416			1443	486
v/s Ratio Prot		0.43			c0.48			0.55			c0.57	
v/s Ratio Perm												0.11
v/c Ratio		0.95			1.05			1.20			1.25	0.24
Uniform Delay, d1		23.5			24.5			24.5			24.5	14.9
Progression Factor		1.00			1.00			0.64			1.00	1.00
Incremental Delay, d2		14.2			38.8			90.6			119.7	1.1
Delay (s)		37.7			63.3			106.4			144.2	16.1
Level of Service		D			E			F			F	B
Approach Delay (s)		37.7			63.3			106.4			136.2	
Approach LOS		D			E			F			F	
Intersection Summary												
HCM Average Control Delay			91.3				HCM Level of Service				F	
HCM Volume to Capacity ratio			1.15									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			122.9%				ICU Level of Service			H		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕		↖	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.97		1.00	0.97		1.00	0.96		1.00	0.90	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4371		1583	4340		1583	2997		1583	2737	
Flt Permitted	0.14	1.00		0.14	1.00		0.13	1.00		0.13	1.00	
Satd. Flow (perm)	235	4371		236	4340		212	2997		224	2737	
Volume (vph)	294	1274	106	128	1554	137	136	1502	164	106	1069	401
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	320	1385	115	139	1689	149	148	1633	178	115	1162	436
RTOR Reduction (vph)	0	11	0	0	12	0	0	9	0	0	43	0
Lane Group Flow (vph)	320	1489	0	139	1826	0	148	1802	0	115	1555	0
Conf. Peds. (#/hr)	663		371	371		663	453		618	618		453
Conf. Bikes (#/hr)			12			12			20			20
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	35.0	27.0		34.6	26.8		38.2	30.2		35.0	28.6	
Effective Green, g (s)	36.4	28.4		36.0	28.2		39.4	31.4		36.2	29.8	
Actuated g/C Ratio	0.40	0.32		0.40	0.31		0.44	0.35		0.40	0.33	
Clearance Time (s)	4.0	5.4		4.0	5.4		4.0	5.2		4.0	5.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	215	1379		211	1360		215	1046		187	906	
v/s Ratio Prot	c0.13	0.34		0.06	0.42		c0.06	c0.60		0.04	0.57	
v/s Ratio Perm	c0.47			0.21			0.24			0.20		
v/c Ratio	1.49	1.08		0.66	1.34		0.69	1.72		0.61	1.72	
Uniform Delay, d1	43.2	30.8		21.0	30.9		41.2	29.3		22.3	30.1	
Progression Factor	1.85	0.96		0.77	0.87		0.79	1.00		1.63	1.52	
Incremental Delay, d2	226.6	40.2		4.9	157.7		4.7	327.3		0.5	322.9	
Delay (s)	306.5	69.9		21.2	184.5		37.1	356.7		36.8	368.6	
Level of Service	F	E		C	F		D	F		D	F	
Approach Delay (s)		111.5			173.0			332.5			346.3	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	239.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.46		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	129.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3136		1583	3116		1583	3162		1583	3153	
Flt Permitted	0.26	1.00		0.32	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	436	3136		534	3116		163	3162		163	3153	
Volume (vph)	51	588	40	95	662	79	63	1413	15	109	1522	45
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	54	626	43	101	704	84	67	1503	16	116	1619	48
RTOR Reduction (vph)	0	4	0	0	7	0	0	1	0	0	2	0
Lane Group Flow (vph)	54	665	0	101	781	0	67	1518	0	116	1665	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	8			4			6			2		
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	40.4	40.4		40.4	40.4		40.3	40.3		40.3	40.3	
Effective Green, g (s)	41.0	41.0		41.0	41.0		41.0	41.0		41.0	41.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46		0.46	0.46		0.46	0.46	
Clearance Time (s)	4.6	4.6		4.6	4.6		4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	199	1429		243	1420		74	1440		74	1436	
v/s Ratio Prot		0.21			c0.25			0.48			0.53	
v/s Ratio Perm	0.12			0.19			0.41			c0.71		
v/c Ratio	0.27	0.47		0.42	0.55		0.91	1.05		1.57	1.16	
Uniform Delay, d1	15.2	16.9		16.5	17.8		22.7	24.5		24.5	24.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.48	0.47	
Incremental Delay, d2	3.3	1.1		5.2	1.5		80.5	39.4		261.3	72.5	
Delay (s)	18.6	18.0		21.6	19.3		103.2	63.9		273.0	84.0	
Level of Service	B	B		C	B		F	E		F	F	
Approach Delay (s)		18.1			19.6			65.6			96.3	
Approach LOS		B			B			E			F	

Intersection Summary

HCM Average Control Delay	61.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗		↗	↗↗	↗	↗	↗↗	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4537		1583	4458		1583	3167	1417	1583	3167	1417
Flt Permitted	0.12	1.00		0.12	1.00		0.12	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	196	4537		195	4458		194	3167	1417	194	3167	1417
Volume (vph)	75	2094	42	98	1508	235	217	1155	72	170	1322	151
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	76	2115	42	99	1523	237	219	1167	73	172	1335	153
RTOR Reduction (vph)	0	2	0	0	21	0	0	0	20	0	0	13
Lane Group Flow (vph)	76	2155	0	99	1739	0	219	1167	53	172	1335	140
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases	6			2			8		8	4		4
Actuated Green, G (s)	40.4	33.0		40.8	33.2		41.4	33.4	41.0	41.4	33.4	40.8
Effective Green, g (s)	41.4	34.0		41.8	34.2		42.4	34.4	42.0	42.4	34.4	41.8
Actuated g/C Ratio	0.41	0.34		0.42	0.34		0.42	0.34	0.42	0.42	0.34	0.42
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	184	1543		187	1525		193	1089	652	193	1089	649
v/s Ratio Prot	0.03	c0.48		c0.04	0.39		c0.09	0.37	0.01	0.07	c0.42	0.02
v/s Ratio Perm	0.14			0.18			0.39		0.03	0.31		0.08
v/c Ratio	0.41	1.40		0.53	1.14		1.13	1.07	0.08	0.89	1.23	0.22
Uniform Delay, d1	23.4	33.0		23.9	32.9		48.2	32.8	17.4	23.7	32.8	18.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.5	182.5		2.7	71.6		105.7	48.6	0.1	36.2	109.9	0.2
Delay (s)	24.9	215.5		26.6	104.5		153.9	81.4	17.5	59.9	142.7	18.8
Level of Service	C	F		C	F		F	F	B	E	F	B
Approach Delay (s)		209.0			100.3			89.1			122.7	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	136.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	119.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕		↖	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4517		1583	4501		1583	3118		1583	3107	
Flt Permitted	0.09	1.00		0.09	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	145	4517		145	4501		185	3118		185	3107	
Volume (vph)	303	2081	107	112	1761	135	76	1135	128	82	1471	210
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	309	2123	109	114	1797	138	78	1158	131	84	1501	214
RTOR Reduction (vph)	0	3	0	0	10	0	0	2	0	0	5	0
Lane Group Flow (vph)	309	2229	0	114	1925	0	78	1287	0	84	1710	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	6			2			8			4		
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	45.5	45.5		45.5	45.5		35.5	35.5		35.5	35.5	
Effective Green, g (s)	46.0	46.0		46.0	46.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.40	0.40		0.40	0.40	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	2309		74	2301		74	1247		74	1243	
v/s Ratio Prot		0.49			0.43			0.41			0.55	
v/s Ratio Perm	c2.13			0.79			0.42			0.45		
v/c Ratio	4.18	0.97		1.54	0.84		1.05	1.03		1.14	1.38	
Uniform Delay, d1	22.0	21.2		22.0	18.8		27.0	27.0		27.0	27.0	
Progression Factor	1.23	1.28		1.14	1.15		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1449.8	9.0		249.3	0.4		120.3	34.1		145.9	174.1	
Delay (s)	1476.7	36.2		274.3	22.0		147.3	61.1		172.9	201.1	
Level of Service	F	D		F	C		F	E		F	F	
Approach Delay (s)		211.3			36.1			66.1			199.8	
Approach LOS		F			D			E			F	

Intersection Summary

HCM Average Control Delay	136.7	HCM Level of Service	F
HCM Volume to Capacity ratio	2.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	134.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↑	↗		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)	1583	4532		1583	4538			1643	1417		1529	
Flt Permitted	0.07	1.00		0.06	1.00			0.90	1.00		0.90	
Satd. Flow (perm)	124	4532		98	4538			1503	1417		1392	
Volume (vph)	41	2317	63	79	1855	34	27	66	82	28	22	54
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	2518	68	86	2016	37	29	72	89	30	24	59
RTOR Reduction (vph)	0	2	0	0	1	0	0	0	2	0	8	0
Lane Group Flow (vph)	45	2584	0	86	2052	0	0	101	87	0	105	0
Turn Type	Perm		Perm		Perm		Perm		Perm	Perm		
Protected Phases	6		2		2		8		8	4		
Permitted Phases	6		2		8		8		8	4		
Actuated Green, G (s)	68.3	68.3		68.3	68.3			13.2	13.2		13.2	
Effective Green, g (s)	68.3	68.3		68.3	68.3			13.7	13.7		13.7	
Actuated g/C Ratio	0.76	0.76		0.76	0.76			0.15	0.15		0.15	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.5	4.5		4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	94	3439		74	3444			229	216		212	
v/s Ratio Prot	0.57		0.45									
v/s Ratio Perm	0.36		c0.88				0.07		0.06	c0.08		
v/c Ratio	0.48		1.16		0.60		0.44		0.40	0.50		
Uniform Delay, d1	4.1		10.9		4.8		34.7		34.5	35.0		
Progression Factor	1.00		1.23		0.86		1.00		1.00	1.00		
Incremental Delay, d2	16.4		120.4		0.3		1.4		1.2	1.8		
Delay (s)	20.5		133.8		4.5		36.0		35.7	36.8		
Level of Service	C		F		A		D		D	D		
Approach Delay (s)	7.9		9.7				35.9			36.8		
Approach LOS	A		A				D			D		

























Intersection Summary			
HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵↵↵	↵
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.91
Frbp, ped/bikes	0.96		1.00	1.00	0.98	0.96
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	0.95	0.85
Flt Protected	1.00		0.95	1.00	0.97	1.00
Satd. Flow (prot)	4249		1583	4550	2908	1238
Flt Permitted	1.00		0.09	1.00	0.97	1.00
Satd. Flow (perm)	4249		149	4550	2908	1238
Volume (vph)	1840	448	570	1452	576	722
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1878	457	582	1482	588	737
RTOR Reduction (vph)	45	0	0	0	83	1
Lane Group Flow (vph)	2290	0	582	1482	817	424
Conf. Peds. (#/hr)		184	184			22
Conf. Bikes (#/hr)		4				5
Turn Type			pm+pt		pm+ov	
Protected Phases	6		5	2	4	5
Permitted Phases			2			4
Actuated Green, G (s)	39.8		51.8	51.8	28.5	36.5
Effective Green, g (s)	40.8		52.8	52.8	29.2	37.2
Actuated g/C Ratio	0.45		0.59	0.59	0.32	0.41
Clearance Time (s)	5.0		4.0	5.0	4.7	4.0
Vehicle Extension (s)	3.0		2.0	3.0	2.0	2.0
Lane Grp Cap (vph)	1926		215	2669	943	567
v/s Ratio Prot	0.54		c0.24	0.33	c0.28	0.07
v/s Ratio Perm			c1.35			0.28
v/c Ratio	1.19		2.71	0.56	0.87	0.75
Uniform Delay, d1	24.6		26.8	11.4	28.6	22.4
Progression Factor	1.00		1.00	1.00	0.68	0.33
Incremental Delay, d2	90.5		781.2	0.8	5.8	3.3
Delay (s)	115.1		808.0	12.2	25.2	10.7
Level of Service	F		F	B	C	B
Approach Delay (s)	115.1			236.6	20.6	
Approach LOS	F			F	C	

Intersection Summary

HCM Average Control Delay	137.0	HCM Level of Service	F
HCM Volume to Capacity ratio	2.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	125.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Fr _t	1.00	0.96		1.00	1.00	0.85	1.00	0.98		1.00	1.00	
Fl _t Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3048		1583	1667	1417	1583	3116		1583	3163	
Fl _t Permitted	0.47	1.00		0.37	1.00	1.00	0.24	1.00		0.11	1.00	
Satd. Flow (perm)	787	3048		624	1667	1417	398	3116		189	3163	
Volume (vph)	20	346	115	185	241	59	138	1258	149	20	955	7
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	20	353	117	189	246	60	141	1284	152	20	974	7
RTOR Reduction (vph)	0	0	0	0	0	42	0	10	0	0	0	0
Lane Group Flow (vph)	20	470	0	189	246	18	141	1426	0	20	981	0
Turn Type	Perm			Perm			Perm	Perm		Perm		
Protected Phases	8			4			4	6		2		
Permitted Phases	8			4			4	6		2		
Actuated Green, G (s)	26.4	26.4		26.4	26.4	26.4	54.3	54.3		54.3	54.3	
Effective Green, g (s)	27.0	27.0		27.0	27.0	27.0	55.0	55.0		55.0	55.0	
Actuated g/C Ratio	0.30	0.30		0.30	0.30	0.30	0.61	0.61		0.61	0.61	
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	236	914		187	500	425	243	1904		116	1933	
v/s Ratio Prot		0.15			0.15			c0.46			0.31	
v/s Ratio Perm	0.03			c0.30		0.01	0.35			0.11		
v/c Ratio	0.08	0.51		1.01	0.49	0.04	0.58	0.75		0.17	0.51	
Uniform Delay, d ₁	22.6	26.1		31.5	25.9	22.3	10.5	12.5		7.6	9.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.58	1.71		0.35	0.45	
Incremental Delay, d ₂	0.7	2.1		68.6	3.4	0.2	0.9	0.3		0.3	0.1	
Delay (s)	23.3	28.1		100.1	29.3	22.5	17.6	21.8		2.9	4.5	
Level of Service	C	C		F	C	C	B	C		A	A	
Approach Delay (s)		27.9			55.5			21.4			4.4	
Approach LOS		C			E			C			A	
Intersection Summary												
HCM Average Control Delay			22.3	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				8.0				
Intersection Capacity Utilization			92.1%	ICU Level of Service				F				
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↗↖		↖	↗↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4497		1583	4522		1583	3129		1583	3167	1417
Flt Permitted	0.14	1.00		0.95	1.00		0.12	1.00		0.14	1.00	1.00
Satd. Flow (perm)	238	4497		1583	4522		208	3129		230	3167	1417
Volume (vph)	72	2254	189	79	1653	71	122	1404	122	70	1186	146
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	76	2373	199	83	1740	75	128	1478	128	74	1248	154
RTOR Reduction (vph)	0	10	0	0	5	0	0	6	0	0	0	98
Lane Group Flow (vph)	76	2562	0	83	1810	0	128	1600	0	74	1248	56
Turn Type	pm+pt		Prot		pm+pt		pm+pt		pm+pt		Perm	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2						4		8		8	
Actuated Green, G (s)	32.4	27.1		8.2	29.1		40.3	31.0		34.3	28.0	28.0
Effective Green, g (s)	33.7	28.0		7.7	30.0		41.3	32.0		35.3	29.0	29.0
Actuated g/C Ratio	0.37	0.31		0.09	0.33		0.46	0.36		0.39	0.32	0.32
Clearance Time (s)	4.4	4.9		3.5	4.9		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	174	1399		135	1507		238	1113		185	1020	457
v/s Ratio Prot	0.03	c0.57		c0.05	0.40		c0.06	c0.51		0.03	0.39	
v/s Ratio Perm	0.14						0.19		0.13		0.04	
v/c Ratio	0.44	1.83		0.61	1.20		0.54	1.44		0.40	1.22	0.12
Uniform Delay, d1	22.9	31.0		39.7	30.0		20.0	29.0		22.1	30.5	21.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.91	0.80	0.69
Incremental Delay, d2	1.8	376.8		8.1	97.0		2.3	201.9		1.2	108.4	0.5
Delay (s)	24.6	407.8		47.8	127.0		22.4	230.9		21.4	132.9	15.2
Level of Service	C		D		F		C		F		B	
Approach Delay (s)	396.8				123.6		215.5				115.0	
Approach LOS	F				F		F				F	

Intersection Summary

HCM Average Control Delay	235.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	123.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↑	↗		↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.99	1.00
Satd. Flow (prot)	1583	4517		1583	4535			1640	1417		1646	1417
Flt Permitted	0.09	1.00		0.09	1.00			0.98	1.00		0.99	1.00
Satd. Flow (perm)	147	4517		147	4535			1640	1417		1646	1417
Volume (vph)	64	2080	106	6	1880	44	80	163	42	63	192	34
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	70	2286	116	7	2066	48	88	179	46	69	211	37
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	36	0	0	32
Lane Group Flow (vph)	70	2402	0	7	2112	0	0	267	10	0	280	5
Turn Type	Perm		Perm		Split		Perm		Split		Perm	
Protected Phases	6		2		4		4		3		3	
Permitted Phases	6		2				4				3	
Actuated Green, G (s)	43.6	43.6		43.6	43.6			19.0	19.0		10.5	10.5
Effective Green, g (s)	45.5	45.5		45.5	45.5			20.5	20.5		12.0	12.0
Actuated g/C Ratio	0.51	0.51		0.51	0.51			0.23	0.23		0.13	0.13
Clearance Time (s)	5.9	5.9		5.9	5.9			5.5	5.5		5.5	5.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	74	2284		74	2293			374	323		219	189
v/s Ratio Prot	c0.53				0.47		c0.16				c0.17	
v/s Ratio Perm	0.48		0.05				0.01				0.00	
v/c Ratio	0.95	1.05		0.09	0.92			0.71	0.03		1.28	0.03
Uniform Delay, d1	21.1	22.2		11.6	20.6			32.0	27.0		39.0	33.9
Progression Factor	0.69	0.69		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	80.7	32.6		2.5	7.5			6.3	0.0		155.7	0.1
Delay (s)	95.3	48.0		14.1	28.1			38.4	27.1		194.7	34.0
Level of Service	F	D		B	C			D	C		F	C
Approach Delay (s)	49.3		28.1		36.7		176.0					
Approach LOS	D		C		D		F					

Intersection Summary

HCM Average Control Delay	47.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↕			↖	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	1583	4546		1583	4541			1637			1649	1417
Flt Permitted	0.12	1.00		0.08	1.00			0.99			0.99	1.00
Satd. Flow (perm)	207	4546		127	4541			1637			1649	1417
Volume (vph)	210	1859	11	23	1422	18	69	180	10	22	79	205
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	219	1936	11	24	1481	19	72	188	10	23	82	214
RTOR Reduction (vph)	0	0	0	0	1	0	0	2	0	0	0	93
Lane Group Flow (vph)	219	1947	0	24	1499	0	0	268	0	0	105	121
Turn Type	Perm			Perm			Split			Split		Perm
Protected Phases	6			2			3	3		4	4	
Permitted Phases	6			2								4
Actuated Green, G (s)	51.2	51.2		51.2	51.2			9.6			13.3	13.3
Effective Green, g (s)	52.7	52.7		52.7	52.7			11.0			14.3	14.3
Actuated g/C Ratio	0.59	0.59		0.59	0.59			0.12			0.16	0.16
Clearance Time (s)	5.5	5.5		5.5	5.5			5.4			5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	121	2662		74	2659			200			262	225
v/s Ratio Prot		0.43			0.33			c0.16			0.06	
v/s Ratio Perm	c1.06			0.19								c0.09
v/c Ratio	1.81	0.73		0.32	0.56			1.34			0.40	0.54
Uniform Delay, d1	18.6	13.5		9.5	11.5			39.5			34.0	34.8
Progression Factor	1.00	1.00		1.38	1.45			1.00			1.00	1.00
Incremental Delay, d2	395.1	1.8		4.8	0.4			183.2			1.0	2.5
Delay (s)	413.8	15.3		17.9	17.1			222.7			35.0	37.3
Level of Service	F	B		B	B			F			D	D
Approach Delay (s)		55.6			17.1			222.7			36.6	
Approach LOS		E			B			F			D	

Intersection Summary			
HCM Average Control Delay	51.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.51		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: Wilshire Blvd & Sycamore Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↑	↑↑↑			↑			↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00	
Frbp, ped/bikes		0.99		1.00	1.00			0.98			0.98	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.99		1.00	1.00			0.95			0.93	
Flt Protected		1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		4231		1484	4267			1451			1432	
Flt Permitted		1.00		0.06	1.00			0.94			0.98	
Satd. Flow (perm)		4231		98	4267			1379			1408	
Volume (vph)	0	1947	70	47	1568	22	29	94	73	10	62	73
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	2140	77	52	1723	24	32	103	80	11	68	80
RTOR Reduction (vph)	0	3	0	0	1	0	0	4	0	0	13	0
Lane Group Flow (vph)	0	2214	0	52	1746	0	0	211	0	0	146	0
Confl. Peds. (#/hr)	34		71	71		34	15		9	9		15
Confl. Bikes (#/hr)			8			12			4			2
Turn Type				Perm		Perm				Perm		
Protected Phases		6			2			8			4	
Permitted Phases				2			8			4		
Actuated Green, G (s)		64.3		64.3	64.3			18.2			18.2	
Effective Green, g (s)		63.8		63.8	63.8			18.2			18.2	
Actuated g/C Ratio		0.71		0.71	0.71			0.20			0.20	
Clearance Time (s)		3.5		3.5	3.5			4.0			4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		2999		69	3025			279			285	
v/s Ratio Prot		0.52			0.41							
v/s Ratio Perm				c0.53				c0.15			0.10	
v/c Ratio		0.74		0.75	0.58			0.76			0.51	
Uniform Delay, d1		8.0		8.2	6.5			33.8			32.0	
Progression Factor		1.03		1.00	1.00			1.00			1.00	
Incremental Delay, d2		0.2		53.7	0.8			11.1			1.6	
Delay (s)		8.4		61.9	7.3			44.9			33.5	
Level of Service		A		E	A			D			C	
Approach Delay (s)		8.4			8.8			44.9			33.5	
Approach LOS		A			A			D			C	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑↑	↔	↔	↑↑		↔	↑↑↑		↔	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2980	1333	1490	2959		1490	4248		1490	4239	
Flt Permitted	0.13	1.00	1.00	0.12	1.00		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	202	2980	1333	194	2959		216	4248		216	4239	
Volume (vph)	95	1493	102	119	1336	68	123	2167	122	154	2186	160
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	98	1539	105	123	1377	70	127	2234	126	159	2254	165
RTOR Reduction (vph)	0	0	35	0	4	0	0	7	0	0	9	0
Lane Group Flow (vph)	98	1539	70	123	1443	0	127	2353	0	159	2410	0
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases	8		8	4			6			2		
Actuated Green, G (s)	35.6	30.0	37.0	38.4	31.4		35.0	28.0		35.0	28.0	
Effective Green, g (s)	36.6	31.0	38.0	39.4	32.4		36.0	29.0		36.0	29.0	
Actuated g/C Ratio	0.41	0.34	0.42	0.44	0.36		0.40	0.32		0.40	0.32	
Clearance Time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	4.8	3.0	3.0	4.6		3.0	4.3		3.0	5.5	
Lane Grp Cap (vph)	162	1026	622	186	1065		185	1369		185	1366	
v/s Ratio Prot	0.04	c0.52	0.01	c0.05	0.49		0.05	0.55		c0.07	c0.57	
v/s Ratio Perm	0.21		0.04	0.24			0.22			0.28		
v/c Ratio	0.60	1.50	0.11	0.66	1.36		0.69	1.72		0.86	1.76	
Uniform Delay, d1	22.3	29.5	15.8	41.7	28.8		41.8	30.5		42.8	30.5	
Progression Factor	0.77	0.71	0.64	1.00	1.00		1.59	1.40		1.72	1.45	
Incremental Delay, d2	0.6	225.5	0.0	8.5	166.0		1.0	323.8		3.8	344.0	
Delay (s)	17.8	246.3	10.1	50.2	194.8		67.5	366.6		77.6	388.2	
Level of Service	B	F	B	D	F		E	F		E	F	
Approach Delay (s)		219.2			183.5			351.3			369.1	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	297.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.46		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	133.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗		↘	↗↗↗		↘	↗↗↗	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2980	1333	1490	2926		1490	4222		1490	4278	
Flt Permitted	0.14	1.00	1.00	0.20	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	226	2980	1333	318	2926		157	4222		157	4278	
Volume (vph)	63	769	102	140	1030	144	178	2092	217	102	2179	16
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	64	777	103	141	1040	145	180	2113	219	103	2201	16
RTOR Reduction (vph)	0	0	21	0	1	0	0	14	0	0	1	0
Lane Group Flow (vph)	64	777	82	141	1184	0	180	2318	0	103	2216	0
Turn Type	Perm		Perm	pm+pt		Perm		Perm		Perm		
Protected Phases		8		7	4		6		6		2	
Permitted Phases	8		8	4		6		2				
Actuated Green, G (s)	33.0	33.0	33.0	41.0	41.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	34.0	34.0	34.0	42.0	42.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Actuated g/C Ratio	0.38	0.38	0.38	0.47	0.47	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Clearance Time (s)	5.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	85	1126	504	200	1365	70	1876		70	1901		
v/s Ratio Prot		0.26		0.03	c0.40		0.55			0.52		
v/s Ratio Perm	0.28		0.06	0.30		c1.15		0.66				
v/c Ratio	0.75	0.69	0.16	0.70	0.87	2.57	1.24	1.47	1.17			
Uniform Delay, d1	24.3	23.6	18.6	18.6	21.5	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Progression Factor	1.42	1.45	1.72	1.00	1.00	1.00	1.00	0.39	0.39			
Incremental Delay, d2	5.5	0.3	0.1	10.7	7.7	747.0	110.9	219.1	75.3			
Delay (s)	40.2	34.6	32.0	29.4	29.2	772.0	135.9	229.0	85.1			
Level of Service	D	C	C	C	C	F	F	F	F	F	F	F
Approach Delay (s)		34.7			29.2		181.4		91.5			
Approach LOS		C			C		F		F			F

Intersection Summary

HCM Average Control Delay	104.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	123.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕↕		↕	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.91		1.00	0.91	
Frt		0.99			0.98		1.00	1.00		1.00	1.00	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2954			2910		1490	4280		1490	4262	
Flt Permitted		1.00			1.00		0.19	1.00		0.19	1.00	
Satd. Flow (perm)		2954			2910		300	4280		300	4262	
Volume (vph)	0	1242	77	0	972	181	71	2311	10	96	2208	71
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1267	79	0	992	185	72	2358	10	98	2253	72
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	5	0
Lane Group Flow (vph)	0	1346	0	0	1177	0	72	2367	0	98	2320	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	8		4		4		6		6		2	
Permitted Phases	8		4		4		6		6		2	
Actuated Green, G (s)	30.2		30.2		30.2		20.2		20.2		20.2	
Effective Green, g (s)	31.1		31.1		31.1		20.9		20.9		20.9	
Actuated g/C Ratio	0.52		0.52		0.52		0.35		0.35		0.35	
Clearance Time (s)	4.9		4.9		4.9		4.7		4.7		4.7	
Vehicle Extension (s)	3.0		3.0		3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)	1531		1508		1508		105		1491		105	
v/s Ratio Prot	c0.46		0.40		0.40		c0.55		c0.55		0.54	
v/s Ratio Perm							0.24		0.24		0.33	
v/c Ratio	0.88		0.78		0.78		0.69		1.59		0.93	
Uniform Delay, d1	12.8		11.7		11.7		16.7		19.6		18.9	
Progression Factor	1.00		1.00		1.00		1.00		1.00		1.00	
Incremental Delay, d2	6.1		2.7		2.7		30.7		267.7		71.2	
Delay (s)	18.9		14.4		14.4		47.5		287.3		90.0	
Level of Service	B		B		B		D		F		F	
Approach Delay (s)	18.9		14.4		14.4		280.2		280.2		268.3	
Approach LOS	B		B		B		F		F		F	

Intersection Summary

HCM Average Control Delay	186.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	115.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑		↘	↑↑↑		↘	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.99		1.00	0.98		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1489	4180		1490	4146		1490	4241		1490	4205	
Flt Permitted	0.14	1.00		0.14	1.00		0.13	1.00		0.95	1.00	
Satd. Flow (perm)	216	4180		216	4146		202	4241		1490	4205	
Volume (vph)	208	1751	134	222	1305	142	136	1968	74	147	1961	107
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	212	1787	137	227	1332	145	139	2008	76	150	2001	109
RTOR Reduction (vph)	0	9	0	0	15	0	0	5	0	0	7	0
Lane Group Flow (vph)	212	1915	0	227	1462	0	139	2079	0	150	2103	0
Conf. Peds. (#/hr)	145		153	153		145	164		89	89		164
Conf. Bikes (#/hr)			13			8			6			17
Turn Type	pm+pt		pm+pt		pm+pt		Prot					
Protected Phases	1	6	5	2	3	8	7	4				
Permitted Phases	6		2		8							
Actuated Green, G (s)	36.5	29.0	36.5	29.0	38.5	31.0	7.5	31.0				
Effective Green, g (s)	36.0	29.0	36.0	29.0	38.0	31.0	7.0	31.0				
Actuated g/C Ratio	0.40	0.32	0.40	0.32	0.42	0.34	0.08	0.34				
Clearance Time (s)	3.5	4.0	3.5	4.0	3.5	4.0	3.5	4.0				
Vehicle Extension (s)	3.0	4.0	3.0	4.0	3.0	4.0	2.0	4.0				
Lane Grp Cap (vph)	185	1347	185	1336	185	1461	116	1448				
v/s Ratio Prot	0.09	c0.46	c0.10	0.35	0.06	0.49	c0.10	c0.50				
v/s Ratio Perm	0.37		0.39		0.26							
v/c Ratio	1.15	1.42	1.23	1.09	0.75	1.42	1.29	1.45				
Uniform Delay, d1	23.4	30.5	43.7	30.5	42.2	29.5	41.5	29.5				
Progression Factor	1.62	0.80	1.45	0.80	2.08	1.20	1.00	1.00				
Incremental Delay, d2	91.2	191.7	134.9	52.8	1.6	190.8	181.6	207.6				
Delay (s)	129.1	216.1	198.1	77.0	89.2	226.3	223.1	237.1				
Level of Service	F	F	F	E	F	F	F	F				
Approach Delay (s)	207.4		93.2		217.8		236.2					
Approach LOS	F		F		F		F					

Intersection Summary			
HCM Average Control Delay	194.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	129.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕↕↕		↗	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.98		1.00	1.00		1.00	1.00	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1503			1511		1490	4264		1490	4254	
Flt Permitted		0.95			0.77		0.09	1.00		0.09	1.00	
Satd. Flow (perm)		1439			1169		147	4264		147	4254	
Volume (vph)	47	406	137	62	171	44	18	2070	37	19	2265	45
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	48	414	140	63	174	45	18	2112	38	19	2311	46
RTOR Reduction (vph)	0	1	0	0	1	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	601	0	0	281	0	18	2148	0	19	2355	0
Conf. Peds. (#/hr)	10		12	12		10	57		25	25		57
Conf. Bikes (#/hr)			2						1			15
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		38.3			38.3		42.2	42.2		42.2	42.2	
Effective Green, g (s)		39.3			39.3		42.7	42.7		42.7	42.7	
Actuated g/C Ratio		0.44			0.44		0.47	0.47		0.47	0.47	
Clearance Time (s)		5.0			5.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		628			510		70	2023		70	2018	
v/s Ratio Prot								0.50			c0.55	
v/s Ratio Perm		c0.42			0.24		0.12			0.13		
v/c Ratio		0.96			0.55		0.26	1.06		0.27	1.17	
Uniform Delay, d1		24.5			18.8		14.2	23.6		14.3	23.6	
Progression Factor		1.00			1.00		1.00	1.00		0.46	0.64	
Incremental Delay, d2		25.5			1.3		8.7	38.8		0.9	75.7	
Delay (s)		50.1			20.1		22.8	62.4		7.4	90.8	
Level of Service		D			C		C	E		A	F	
Approach Delay (s)		50.1			20.1			62.1			90.2	
Approach LOS		D			C			E			F	
Intersection Summary												
HCM Average Control Delay			70.9				HCM Level of Service			E		
HCM Volume to Capacity ratio			1.07									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		8.0			
Intersection Capacity Utilization			102.1%				ICU Level of Service		G			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑↑		↗	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	4272		1490	4228		1490	4269		1490	4242	
Flt Permitted	0.12	1.00		0.11	1.00		0.95	1.00		0.11	1.00	
Satd. Flow (perm)	195	4272		171	4228		1490	4269		176	4242	
Volume (vph)	307	1944	33	58	1289	118	42	2054	44	184	2314	156
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	316	2004	34	60	1329	122	43	2118	45	190	2386	161
RTOR Reduction (vph)	0	1	0	0	11	0	0	2	0	0	7	0
Lane Group Flow (vph)	316	2037	0	60	1440	0	43	2161	0	190	2540	0
Turn Type	Perm		pm+pt			Prot		pm+pt				
Protected Phases	8		7		4		5		1			6
Permitted Phases	8		4					2		6		
Actuated Green, G (s)	31.2	31.2	42.0		42.0	5.8		30.2	47.2		37.4	
Effective Green, g (s)	32.6	32.6	43.4		43.4	5.8		31.6	48.6		38.8	
Actuated g/C Ratio	0.33	0.33	0.43		0.43	0.06		0.32	0.49		0.39	
Clearance Time (s)	5.4	5.4	4.0		5.4	4.0		5.4	4.0		5.4	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	4.0		3.0	
Lane Grp Cap (vph)	64	1393	164		1835	86		1349	256		1646	
v/s Ratio Prot	0.48		0.02		c0.34	0.03		c0.10		c0.60		
v/s Ratio Perm	c1.62		0.13			0.51		0.26				
v/c Ratio	4.94	1.46	0.37		0.78	0.50		1.60	0.74		1.54	
Uniform Delay, d1	33.7	33.7	23.4		24.3	45.7		34.2	43.4		30.6	
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	1806.5	211.9	1.4		3.5	4.5		274.4	11.7		247.6	
Delay (s)	1840.2	245.6	24.8		27.7	50.2		308.6	55.1		278.2	
Level of Service	F		C			D		F	E		F	
Approach Delay (s)	459.7		27.6			303.5		262.7				
Approach LOS	F		C			F		F				

Intersection Summary

HCM Average Control Delay	285.2	HCM Level of Service	F
HCM Volume to Capacity ratio	2.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	127.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑			↑↑↑			↑	↗		↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91			0.91			1.00	1.00		1.00	
Frbp, ped/bikes	1.00	0.97			0.99			1.00	0.96		0.99	
Flpb, ped/bikes	0.99	1.00			1.00			0.99	1.00		1.00	
Frt	1.00	0.99			0.99			1.00	0.85		0.98	
Flt Protected	0.95	1.00			1.00			0.99	1.00		0.99	
Satd. Flow (prot)	1469	4112			4207			1532	1281		1504	
Flt Permitted	0.10	1.00			1.00			0.85	1.00		0.63	
Satd. Flow (perm)	156	4112			4207			1326	1281		957	
Volume (vph)	229	1876	189	0	1436	65	78	253	121	51	120	22
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	254	2084	210	0	1596	72	87	281	134	57	133	24
RTOR Reduction (vph)	0	12	0	0	5	0	0	0	3	0	6	0
Lane Group Flow (vph)	254	2282	0	0	1663	0	0	368	131	0	208	0
Confl. Peds. (#/hr)	95		113	113		95	73		22	22		73
Confl. Bikes (#/hr)			13			15			3			3
Turn Type	Perm			Perm			Perm		Perm		Perm	
Protected Phases	6			2			8		8		4	
Permitted Phases	6						8		8		4	
Actuated Green, G (s)	55.4	55.4			55.4			27.1	27.1		27.1	
Effective Green, g (s)	54.9	54.9			54.9			27.1	27.1		27.1	
Actuated g/C Ratio	0.61	0.61			0.61			0.30	0.30		0.30	
Clearance Time (s)	3.5	3.5			3.5			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	95	2508			2566			399	386		288	
v/s Ratio Prot		0.55			0.40							
v/s Ratio Perm	c1.63							c0.28	0.10		0.22	
v/c Ratio	2.67	0.91			0.65			0.92	0.34		0.72	
Uniform Delay, d1	17.6	15.4			11.3			30.4	24.5		28.1	
Progression Factor	1.22	1.18			0.26			1.00	1.00		1.00	
Incremental Delay, d2	775.1	4.8			0.1			26.5	0.5		8.7	
Delay (s)	796.5	23.0			3.1			57.0	25.0		36.8	
Level of Service	F	C			A			E	C		D	
Approach Delay (s)		100.1			3.1			48.4			36.8	
Approach LOS		F			A			D			D	

Intersection Summary			
HCM Average Control Delay	59.3	HCM Level of Service	E
HCM Volume to Capacity ratio	2.09		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	104.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 21: Wilshire Blvd & Curson Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑	↗		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.86	0.86		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.96			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.99	
Satd. Flow (prot)	1583	4537		1583	4300	1218		1587			1586	
Flt Permitted	0.11	1.00		0.08	1.00	1.00		0.89			0.81	
Satd. Flow (perm)	176	4537		128	4300	1218		1414			1302	
Volume (vph)	141	1794	35	77	1376	96	36	170	93	82	226	126
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	155	1971	38	85	1512	105	40	187	102	90	248	138
RTOR Reduction (vph)	0	2	0	0	0	44	0	7	0	0	16	0
Lane Group Flow (vph)	155	2007	0	85	1512	61	0	322	0	0	460	0
Turn Type	Perm			Perm			Perm	Perm			Perm	
Protected Phases	6			2			8	8			4	
Permitted Phases	6			2			8	8			4	
Actuated Green, G (s)	52.0	52.0		52.0	52.0	52.0		30.0			30.0	
Effective Green, g (s)	52.0	52.0		52.0	52.0	52.0		30.0			30.0	
Actuated g/C Ratio	0.58	0.58		0.58	0.58	0.58		0.33			0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	102	2621		74	2484	704		471			434	
v/s Ratio Prot		0.44			0.35							
v/s Ratio Perm	c0.88			0.66		0.05		0.23			c0.35	
v/c Ratio	1.52	0.77		1.15	0.61	0.09		0.68			1.06	
Uniform Delay, d1	19.0	14.4		19.0	12.4	8.4		25.9			30.0	
Progression Factor	1.92	2.07		0.95	0.76	0.57		1.00			1.00	
Incremental Delay, d2	264.2	1.5		135.7	0.8	0.2		4.1			60.0	
Delay (s)	300.8	31.2		153.7	10.3	5.0		30.0			90.0	
Level of Service	F	C		F	B	A		C			F	
Approach Delay (s)		50.5			17.1			30.0			90.0	
Approach LOS		D			B			C			F	

Intersection Summary

HCM Average Control Delay	40.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	1.00		1.00	1.00	1.00	
Flt Protected	1.00		0.95	1.00	0.95	
Satd. Flow (prot)	4546		1583	4550	1582	
Flt Permitted	1.00		0.07	1.00	0.95	
Satd. Flow (perm)	4546		121	4550	1582	
Volume (vph)	1990	10	55	1460	79	3
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2095	11	58	1537	83	3
RTOR Reduction (vph)	0	0	0	0	1	0
Lane Group Flow (vph)	2106	0	58	1537	85	0
Turn Type			Perm			
Protected Phases	6			2	8	
Permitted Phases			2			
Actuated Green, G (s)	54.8		54.8	54.8	26.0	
Effective Green, g (s)	55.3		55.3	55.3	26.7	
Actuated g/C Ratio	0.61		0.61	0.61	0.30	
Clearance Time (s)	4.5		4.5	4.5	4.7	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2793		74	2796	469	
v/s Ratio Prot	0.46			0.34	c0.05	
v/s Ratio Perm			c0.48			
v/c Ratio	0.75		0.78	0.55	0.18	
Uniform Delay, d1	12.5		12.9	10.1	23.5	
Progression Factor	1.00		1.57	1.61	1.00	
Incremental Delay, d2	1.9		45.5	0.6	0.2	
Delay (s)	14.4		65.7	16.8	23.7	
Level of Service	B		E	B	C	
Approach Delay (s)	14.4			18.6	23.7	
Approach LOS	B			B	C	

Intersection Summary

HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↘	↘	↑↑	↘	↘	↑↑	↘	↘	↑↑	↘
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.99
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	3167	1417	1583	3167	1417	1583	3167	1417	1583	3131	3131
Flt Permitted	0.17	1.00	1.00	0.10	1.00	1.00	0.15	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	288	3167	1417	167	3167	1417	247	3167	1417	215	3131	3131
Volume (vph)	106	1444	106	171	1121	213	122	1306	233	124	1287	105
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	110	1504	110	178	1168	222	127	1360	243	129	1341	109
RTOR Reduction (vph)	0	0	16	0	0	1	0	0	120	0	6	0
Lane Group Flow (vph)	110	1504	94	178	1168	221	127	1360	123	129	1444	0
Turn Type	Perm		Perm	pm+pt		pm+ov	Perm		Perm	pm+pt		
Protected Phases		6		5		2	7		8		7	4
Permitted Phases	6		6	2		2	8		8		4	
Actuated Green, G (s)	35.0	35.0	35.0	44.0	44.0	49.7	27.1	27.1	27.1	36.0	36.0	36.0
Effective Green, g (s)	36.0	36.0	36.0	45.0	45.0	51.0	27.0	27.0	27.0	37.0	37.0	37.0
Actuated g/C Ratio	0.40	0.40	0.40	0.50	0.50	0.57	0.30	0.30	0.30	0.41	0.41	0.41
Clearance Time (s)	5.0	5.0	5.0	3.2	5.0	4.3	3.9	3.9	3.9	4.3	5.0	5.0
Vehicle Extension (s)	4.7	4.7	4.7	3.0	4.2	3.0	4.3	4.3	4.3	3.0	4.5	4.5
Lane Grp Cap (vph)	115	1267	567	162	1584	866	74	950	425	180	1287	1287
v/s Ratio Prot		c0.47		c0.06	0.37	0.02		0.43		0.05	c0.46	
v/s Ratio Perm	0.38		0.07	0.49		0.14	c0.51		0.09	0.25		
v/c Ratio	0.96	1.19	0.17	1.10	0.74	0.26	1.72	1.43	0.29	0.72	1.12	1.12
Uniform Delay, d1	26.2	27.0	17.3	44.7	17.8	9.9	31.5	31.5	24.2	42.7	26.5	26.5
Progression Factor	1.00	1.00	1.00	2.39	0.25	0.29	0.49	0.49	0.14	1.13	1.16	1.16
Incremental Delay, d2	72.9	92.4	0.6	53.7	0.3	0.0	327.5	194.8	0.2	8.6	62.1	62.1
Delay (s)	99.1	119.4	18.0	160.5	4.7	2.9	342.8	210.1	3.6	56.9	92.8	92.8
Level of Service	F	F	B	F	A	A	F	F	A	E	F	F
Approach Delay (s)		111.6			22.1			190.8			89.9	
Approach LOS		F			C			F			F	

Intersection Summary

HCM Average Control Delay	105.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	120.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗	↖	↕		↖	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3143		1583	3167	1417	1583	3148		1583	3128	
Flt Permitted	0.19	1.00		0.12	1.00	1.00	0.14	1.00		0.12	1.00	
Satd. Flow (perm)	324	3143		196	3167	1417	238	3148		208	3128	
Volume (vph)	176	1353	73	127	823	197	115	1264	52	239	1360	122
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	180	1381	74	130	840	201	117	1290	53	244	1388	124
RTOR Reduction (vph)	0	4	0	0	0	33	0	3	0	0	8	0
Lane Group Flow (vph)	180	1451	0	130	840	168	117	1340	0	244	1504	0
Turn Type	pm+pt			pm+pt		pm+ov	Perm			pm+pt		
Protected Phases	1	6		5	2	7		8		7	4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	40.1	32.3		39.7	32.1	37.9	26.1	26.1		35.1	35.1	
Effective Green, g (s)	41.2	34.2		40.8	34.0	39.0	28.0	28.0		37.0	37.0	
Actuated g/C Ratio	0.46	0.38		0.45	0.38	0.43	0.31	0.31		0.41	0.41	
Clearance Time (s)	3.2	5.9		3.2	5.9	3.2	5.9	5.9		3.2	5.9	
Vehicle Extension (s)	3.0	4.6		3.0	4.7	3.0	4.7	4.7		3.0	4.7	
Lane Grp Cap (vph)	246	1194		194	1196	677	74	979		162	1286	
v/s Ratio Prot	c0.06	c0.46		0.05	0.27	0.01		0.43		c0.08	0.48	
v/s Ratio Perm	0.28			0.25		0.10	0.49			c0.54		
v/c Ratio	0.73	1.21		0.67	0.70	0.25	1.58	1.37		1.51	1.17	
Uniform Delay, d1	16.6	27.9		21.1	23.7	16.2	31.0	31.0		44.7	26.5	
Progression Factor	1.00	1.00		1.78	1.13	0.97	1.49	1.48		0.93	0.51	
Incremental Delay, d2	10.7	104.6		0.8	0.3	0.0	309.7	171.4		236.3	78.9	
Delay (s)	27.3	132.5		38.3	27.1	15.8	355.7	217.4		277.7	92.4	
Level of Service	C	F		D	C	B	F	F		F	F	
Approach Delay (s)		120.9			26.4			228.5			118.1	
Approach LOS		F			C			F			F	

Intersection Summary

HCM Average Control Delay	127.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	121.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖↗	↖	↗	↖	↖↗	↗	↖	↖↗	↖↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	0.98		1.00	1.00	0.75	1.00	1.00	0.65	1.00	0.98	
Flpb, ped/bikes	0.85	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1340	1622		3072	1667	1060	1583	3167	918	1502	3091	
Flt Permitted	0.56	1.00		0.95	1.00	1.00	0.09	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	795	1622		3072	1667	1060	147	3167	918	276	3091	
Volume (vph)	19	439	33	133	313	148	6	1040	284	15	1275	62
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	20	457	34	139	326	154	6	1083	296	16	1328	65
RTOR Reduction (vph)	0	3	0	0	0	17	0	0	0	0	4	0
Lane Group Flow (vph)	20	488	0	139	326	137	6	1083	296	16	1389	0
Confl. Peds. (#/hr)	152		159	159		152	117		165	165		117
Confl. Bikes (#/hr)			5			9			7			6
Turn Type	Perm			Prot		Perm	Perm		pm+ov		Perm	
Protected Phases		8		7	4			6	7			2
Permitted Phases	8					4	6		6		2	
Actuated Green, G (s)	20.2	20.2		10.0	34.2	34.2	46.2	46.2	56.2	46.2	46.2	
Effective Green, g (s)	21.0	21.0		10.0	35.0	35.0	47.0	47.0	57.0	47.0	47.0	
Actuated g/C Ratio	0.23	0.23		0.11	0.39	0.39	0.52	0.52	0.63	0.52	0.52	
Clearance Time (s)	4.8	4.8		4.0	4.8	4.8	4.8	4.8	4.0	4.8	4.8	
Vehicle Extension (s)	5.9	5.9		3.0	5.2	5.2	4.8	4.8	3.0	4.4	4.4	
Lane Grp Cap (vph)	186	378		341	648	412	77	1654	622	144	1614	
v/s Ratio Prot		c0.30		0.05	0.20			0.34	c0.05		c0.45	
v/s Ratio Perm	0.03					0.13	0.04		0.27		0.06	
v/c Ratio	0.11	1.29		0.41	0.50	0.33	0.08	0.65	0.48	0.11	0.86	
Uniform Delay, d1	27.1	34.5		37.2	20.9	19.3	10.7	15.6	8.7	10.9	18.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.29	0.26	0.31	0.39	0.79	
Incremental Delay, d2	1.2	149.4		0.8	2.8	2.2	0.2	0.2	0.1	0.1	0.6	
Delay (s)	28.3	183.9		38.0	23.7	21.5	3.3	4.2	2.8	4.4	15.3	
Level of Service	C	F		D	C	C	A	A	A	A	B	
Approach Delay (s)		177.8			26.3			3.9			15.2	
Approach LOS		F			C			A			B	

Intersection Summary

HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.97		1.00	0.98		1.00	0.94		1.00	1.00	0.81
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4325		1583	4402		1583	2911		1583	3167	1151
Flt Permitted	0.15	1.00		0.15	1.00		0.13	1.00		0.95	1.00	1.00
Satd. Flow (perm)	244	4325		244	4402		217	2911		1583	3167	1151
Volume (vph)	295	1978	327	187	1156	107	69	1303	230	163	1556	212
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	311	2082	344	197	1217	113	73	1372	242	172	1638	223
RTOR Reduction (vph)	0	26	0	0	13	0	0	16	0	0	0	110
Lane Group Flow (vph)	311	2400	0	197	1317	0	73	1598	0	172	1638	113
Confl. Peds. (#/hr)	152		159	159		152	166		214	214		166
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8					4
Actuated Green, G (s)	33.1	26.3		33.1	26.3		35.1	29.7		10.8	35.1	35.1
Effective Green, g (s)	33.3	27.3		33.3	27.3		35.3	30.7		10.0	36.1	36.1
Actuated g/C Ratio	0.37	0.30		0.37	0.30		0.39	0.34		0.11	0.40	0.40
Clearance Time (s)	3.2	5.0		3.2	5.0		3.2	5.0		3.2	5.0	5.0
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	180	1312		180	1335		155	993		176	1270	462
v/s Ratio Prot	c0.12	c0.55		0.07	0.30		0.02	c0.55		c0.11	0.52	
v/s Ratio Perm	0.52			0.33			0.16					0.10
v/c Ratio	1.73	1.83		1.09	0.99		0.47	1.61		0.98	1.29	0.25
Uniform Delay, d1	25.6	31.4		27.2	31.2		22.7	29.6		39.9	26.9	17.9
Progression Factor	1.33	1.20		1.00	1.00		0.95	0.82		0.83	1.51	2.88
Incremental Delay, d2	341.7	375.1		94.6	21.7		1.9	278.2		53.3	135.2	1.0
Delay (s)	375.6	412.8		121.8	52.9		23.5	302.4		86.4	175.9	52.6
Level of Service	F	F		F	D		C	F		F	F	D
Approach Delay (s)		408.6			61.8			290.3			154.8	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	252.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	136.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗	↖	↔	↗		↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)			4.0	4.0	4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor			1.00	0.95	0.91	0.95		0.95		1.00	0.95	
Frbp, ped/bikes			0.98	1.00	0.98	0.97		0.99		1.00	1.00	
Flpb, ped/bikes			1.00	1.00	1.00	1.00		1.00		1.00	1.00	
Frt			0.86	1.00	0.92	0.85		0.99		1.00	1.00	
Flt Protected			1.00	0.95	0.98	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1413	1501	1337	1299		3099		1576	3167	
Flt Permitted			1.00	0.95	0.98	1.00		1.00		0.13	1.00	
Satd. Flow (perm)			1413	1501	1337	1299		3099		212	3167	
Volume (vph)	0	0	83	111	0	128	0	1280	126	184	1209	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	85	113	0	131	0	1306	129	188	1234	0
RTOR Reduction (vph)	0	0	80	0	40	72	0	6	0	0	0	0
Lane Group Flow (vph)	0	0	5	72	48	12	0	1429	0	188	1234	0
Conf. Peds. (#/hr)	10		1	1		10	18		29	29		18
Conf. Bikes (#/hr)			1			2			3			3
Turn Type			custom	Perm		Perm				Perm		
Protected Phases					3			2			2	
Permitted Phases			4	3		3				2		
Actuated Green, G (s)			4.8	12.3	12.3	12.3		58.5		58.5	58.5	
Effective Green, g (s)			5.7	13.2	13.2	13.2		59.1		59.1	59.1	
Actuated g/C Ratio			0.06	0.15	0.15	0.15		0.66		0.66	0.66	
Clearance Time (s)			4.9	4.9	4.9	4.9		4.6		4.6	4.6	
Vehicle Extension (s)			3.0	3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)			89	220	196	191		2035		139	2080	
v/s Ratio Prot								0.46			0.39	
v/s Ratio Perm			c0.00	c0.05	0.04	0.01				c0.89		
v/c Ratio			0.06	0.33	0.24	0.06		0.70		1.35	0.59	
Uniform Delay, d1			39.6	34.4	34.0	33.1		9.8		15.4	8.7	
Progression Factor			1.00	1.00	1.00	1.00		1.00		1.15	0.69	
Incremental Delay, d2			0.3	0.9	0.7	0.1		2.1		163.0	0.1	
Delay (s)			39.9	35.3	34.6	33.2		11.9		180.8	6.1	
Level of Service			D	D	C	C		B		F	A	
Approach Delay (s)		39.9			34.3			11.9			29.2	
Approach LOS		D			C			B			C	
Intersection Summary												
HCM Average Control Delay			22.1									HCM Level of Service C
HCM Volume to Capacity ratio			1.08									
Actuated Cycle Length (s)			90.0									Sum of lost time (s) 12.0
Intersection Capacity Utilization			77.9%									ICU Level of Service D
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑		↔	↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	
Lane Util. Factor		0.91			0.91		1.00	0.86			0.86	
Frt		0.99			0.96		1.00	1.00			1.00	
Flt Protected		1.00			1.00		0.95	1.00			1.00	
Satd. Flow (prot)		4491			4370		1583	5733			5733	
Flt Permitted		1.00			1.00		0.17	1.00			1.00	
Satd. Flow (perm)		4491			4370		284	5733			5733	
Volume (vph)	0	1996	188	0	1241	443	68	1396	0	0	1526	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	2037	192	0	1266	452	69	1424	0	0	1557	0
RTOR Reduction (vph)	0	11	0	0	65	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2218	0	0	1653	0	69	1424	0	0	1557	0
Turn Type							Perm					
Protected Phases		6			6			2			2	
Permitted Phases							2					
Actuated Green, G (s)		22.1			22.1		24.5	24.5			24.5	
Effective Green, g (s)		23.0			23.0		23.5	23.5			23.5	
Actuated g/C Ratio		0.23			0.23		0.24	0.24			0.24	
Clearance Time (s)		4.9			4.9		3.0	3.0			3.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		1033			1005		67	1347			1347	
v/s Ratio Prot		c0.49			0.38			0.25			c0.27	
v/s Ratio Perm							0.24					
v/c Ratio		2.15			1.65		1.03	1.06			1.16	
Uniform Delay, d1		38.5			38.5		38.2	38.2			38.2	
Progression Factor		0.69			1.00		1.00	1.00			0.70	
Incremental Delay, d2		516.6			294.8		118.5	41.2			71.0	
Delay (s)		543.3			333.3		156.7	79.4			97.9	
Level of Service		F			F		F	E			F	
Approach Delay (s)		543.3			333.3			83.0			97.9	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	294.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	53.5
Intersection Capacity Utilization	90.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗		↑↑↑	↗		↑↔		↘	↑↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.86	1.00		0.91	1.00		0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85		1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1583	5733	1417		4550	1417		3165		1583	3146	
Flt Permitted	0.17	1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)	284	5733	1417		4550	1417		3165		1583	3146	
Volume (vph)	27	1396	34	0	1400	372	0	1096	3	139	1156	54
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	28	1424	35	0	1429	380	0	1118	3	142	1180	55
RTOR Reduction (vph)	0	0	27	0	0	288	0	0	0	0	3	0
Lane Group Flow (vph)	28	1424	8	0	1429	92	0	1121	0	142	1232	0
Turn Type	Perm		Perm		Perm				Prot			
Protected Phases	2		2		2		8		7		4	
Permitted Phases	2		2		2							
Actuated Green, G (s)	24.5	24.5	24.5		24.5	24.5		31.0		5.0	31.0	
Effective Green, g (s)	23.5	23.5	23.5		23.5	23.5		32.5		5.0	32.5	
Actuated g/C Ratio	0.24	0.24	0.24		0.24	0.24		0.32		0.05	0.32	
Clearance Time (s)	3.0	3.0	3.0		3.0	3.0		5.5		4.0	5.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		5.0		3.0	4.0	
Lane Grp Cap (vph)	67	1347	333		1069	333		1029		79	1022	
v/s Ratio Prot		0.25			c0.31			0.35		c0.09	c0.39	
v/s Ratio Perm	0.10		0.01			0.07						
v/c Ratio	0.42	1.06	0.02		1.34	0.28		1.09		1.80	1.21	
Uniform Delay, d1	32.4	38.2	29.4		38.2	31.3		33.8		47.5	33.8	
Progression Factor	1.00	1.00	1.00		0.88	2.27		0.41		1.00	1.00	
Incremental Delay, d2	18.0	41.2	0.1		152.1	0.2		42.1		404.4	101.7	
Delay (s)	50.5	79.4	29.6		185.8	71.2		55.8		451.9	135.4	
Level of Service	D	E	C		F	E		E		F	F	
Approach Delay (s)		77.7			161.7			55.8			168.1	
Approach LOS		E			F			E			F	

Intersection Summary

HCM Average Control Delay	121.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	39.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↗		↖	↕↕↗		↖	↕↕			↕↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95			0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.99			0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1583	4532		1583	4545		1583	3141			3061	
Flt Permitted	0.17	1.00		0.17	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	290	4532		290	4545		1583	3141			3061	
Volume (vph)	224	2145	59	73	1217	9	34	771	44	0	931	266
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	229	2189	60	74	1242	9	35	787	45	0	950	271
RTOR Reduction (vph)	0	3	0	0	1	0	0	4	0	0	26	0
Lane Group Flow (vph)	229	2246	0	74	1250	0	35	828	0	0	1195	0
Turn Type	Perm		Perm		Prot							
Protected Phases	6		6		3		8				4	
Permitted Phases	6		6									
Actuated Green, G (s)	22.1	22.1		22.1	22.1		5.0	31.0			31.0	
Effective Green, g (s)	23.0	23.0		23.0	23.0		5.0	32.5			32.5	
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.05	0.32			0.32	
Clearance Time (s)	4.9	4.9		4.9	4.9		4.0	5.5			5.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	5.0			4.0	
Lane Grp Cap (vph)	67	1042		67	1045		79	1021			995	
v/s Ratio Prot		0.50			0.28		c0.02	0.26			c0.39	
v/s Ratio Perm	c0.79			0.26								
v/c Ratio	3.42	2.16		1.10	1.20		0.44	0.81			1.20	
Uniform Delay, d1	38.5	38.5		38.5	38.5		46.1	30.9			33.8	
Progression Factor	1.00	1.00		0.71	0.70		1.00	1.00			0.26	
Incremental Delay, d2	1124.8	523.1		65.4	89.3		3.9	7.0			91.3	
Delay (s)	1163.3	561.6		92.7	116.3		50.1	37.9			100.0	
Level of Service	F	F		F	F		D	D			F	
Approach Delay (s)		617.2			115.0			38.4			100.0	
Approach LOS		F			F			D			F	

Intersection Summary

HCM Average Control Delay	311.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.99		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	39.5
Intersection Capacity Utilization	104.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	3145		1583	3139		1583	3167	1417	1583	3167	1417
Flt Permitted	0.13	1.00		0.13	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	222	3145		222	3139		1583	3167	1417	1583	3167	1417
Volume (vph)	94	1374	65	31	839	53	97	695	188	79	917	80
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	98	1431	68	32	874	55	101	724	196	82	955	83
RTOR Reduction (vph)	0	4	0	0	5	0	0	0	61	0	0	46
Lane Group Flow (vph)	98	1495	0	32	924	0	101	724	135	82	955	37
Turn Type	Perm			Perm			Prot		Perm	Prot		Perm
Protected Phases	6			2			3		8	7		4
Permitted Phases	6			2					8			4
Actuated Green, G (s)	29.0	29.0		29.0	29.0		7.8	39.3	39.3	7.7	39.2	39.2
Effective Green, g (s)	30.0	30.0		30.0	30.0		7.8	40.3	40.3	7.7	40.2	40.2
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.09	0.45	0.45	0.09	0.45	0.45
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	74	1048		74	1046		137	1418	635	135	1415	633
v/s Ratio Prot	c0.48			0.29			c0.06	0.23		0.05	c0.30	
v/s Ratio Perm	0.44			0.14			0.10			0.03		
v/c Ratio	1.32	1.43		0.43	0.88		0.74	0.51	0.21	0.61	0.67	0.06
Uniform Delay, d1	30.0	30.0		23.4	28.3		40.1	17.8	15.2	39.7	19.7	14.1
Progression Factor	0.84	0.83		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	154.4	192.5		17.4	10.8		18.5	1.3	0.8	7.5	2.6	0.2
Delay (s)	179.7	217.4		40.7	39.1		58.6	19.1	15.9	47.2	22.3	14.3
Level of Service	F			D			E	B	B	D	C	B
Approach Delay (s)	215.1			39.2			22.4			23.5		
Approach LOS	F			D			C			C		

Intersection Summary

HCM Average Control Delay	91.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↑↑			↖	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95			0.95	
Frt	1.00	0.99		1.00	0.99			0.99			1.00	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1583	4509		1583	4494			3143			3148	
Flt Permitted	0.11	1.00		0.09	1.00			1.00			0.76	
Satd. Flow (perm)	191	4509		152	4494			3143			2386	
Volume (vph)	108	1999	128	93	1291	115	0	1196	64	25	877	27
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	110	2040	131	95	1317	117	0	1220	65	26	895	28
RTOR Reduction (vph)	0	8	0	0	11	0	0	2	0	0	2	0
Lane Group Flow (vph)	110	2163	0	95	1423	0	0	1283	0	0	947	0
Turn Type	Perm		Perm				Perm					
Protected Phases	6		2				8					
Permitted Phases	6		2				4					
Actuated Green, G (s)	42.3	42.3		42.3	42.3			36.0			36.0	
Effective Green, g (s)	44.0	44.0		44.0	44.0			38.0			38.0	
Actuated g/C Ratio	0.49	0.49		0.49	0.49			0.42			0.42	
Clearance Time (s)	5.7	5.7		5.7	5.7			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	93	2204		74	2197			1327			1007	
v/s Ratio Prot	0.48						0.32					
v/s Ratio Perm	0.57		c0.63									
v/c Ratio	1.18	0.98		1.28	0.65			0.97			0.94	
Uniform Delay, d1	23.0	22.6		23.0	17.2			25.4			24.9	
Progression Factor	0.39	0.37		0.55	0.23			1.00			1.00	
Incremental Delay, d2	92.3	2.9		169.8	0.8			17.2			15.9	
Delay (s)	101.3	11.2		182.4	4.8			42.6			40.8	
Level of Service	F	B		F	A			D			D	
Approach Delay (s)	15.6		15.8				42.6					
Approach LOS	B		B				D					

Intersection Summary

HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	112.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑↑		↗	↑↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.99		1.00	0.98		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4487		1583	4476		1583	4367		1583	4550	1417
Flt Permitted	0.13	1.00		0.13	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	222	4487		222	4476		1583	4367		1583	4550	1417
Volume (vph)	294	1790	183	362	1148	139	47	918	336	201	1692	244
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	306	1865	191	377	1196	145	49	956	350	209	1762	254
RTOR Reduction (vph)	0	14	0	0	17	0	0	43	0	0	0	134
Lane Group Flow (vph)	306	2042	0	377	1324	0	49	1263	0	209	1762	120
Turn Type	Perm			Perm			Prot			Prot		Perm
Protected Phases	4			8			5			1		6
Permitted Phases	4			8			2					6
Actuated Green, G (s)	28.0	28.0		28.0	28.0		5.1	33.0		14.0	40.9	40.9
Effective Green, g (s)	30.0	30.0		30.0	30.0		6.1	34.0		14.0	41.9	41.9
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.07	0.38		0.16	0.47	0.47
Clearance Time (s)	6.0	6.0		6.0	6.0		5.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	4.0	4.0		4.0	4.0		2.0	4.0		2.0	4.0	4.0
Lane Grp Cap (vph)	74	1496		74	1492		107	1650		246	2118	660
v/s Ratio Prot		0.46			0.30		0.03			c0.13	c0.39	
v/s Ratio Perm	1.38			c1.70				0.29				0.08
v/c Ratio	4.14	1.36		5.09	0.89		0.46	0.77		0.85	0.83	0.18
Uniform Delay, d1	30.0	30.0		30.0	28.4		40.4	24.5		37.0	21.0	14.0
Progression Factor	1.00	1.00		0.34	0.29		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1442.2	168.6		1868.5	7.2		1.1	3.4		22.2	4.0	0.6
Delay (s)	1472.2	198.6		1878.8	15.5		41.5	28.0		59.1	25.0	14.7
Level of Service	F	F		F	B		D	C		E	C	B
Approach Delay (s)		363.6			424.4			28.4			27.0	
Approach LOS		F			F			C			C	

Intersection Summary

HCM Average Control Delay	220.2	HCM Level of Service	F
HCM Volume to Capacity ratio	2.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	119.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕	↗	↖	↕	↗		↕			↖	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	0.92
Flpb, ped/bikes	0.98	1.00		1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	1.00
Satd. Flow (prot)	1559	4540		1576	4509			1584			1645	1306
Flt Permitted	0.15	1.00		0.06	1.00			0.96			0.92	1.00
Satd. Flow (perm)	238	4540		101	4509			1532			1523	1306
Volume (vph)	80	1952	14	25	1335	39	25	182	50	23	117	262
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	85	2077	15	27	1420	41	27	194	53	24	124	279
RTOR Reduction (vph)	0	1	0	0	3	0	0	8	0	0	0	39
Lane Group Flow (vph)	85	2091	0	27	1458	0	0	266	0	0	148	240
Confl. Peds. (#/hr)	67		64	64		67	46		45	45		46
Confl. Bikes (#/hr)			7			5			5			6
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	69.0	69.0		69.0	69.0			25.0			25.0	25.0
Effective Green, g (s)	68.0	68.0		68.0	68.0			24.0			24.0	24.0
Actuated g/C Ratio	0.68	0.68		0.68	0.68			0.24			0.24	0.24
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0			3.0			3.0	3.0
Lane Grp Cap (vph)	162	3087		69	3066			368			366	313
v/s Ratio Prot		c0.46			0.32							
v/s Ratio Perm	0.36			0.27				0.17			0.10	c0.18
v/c Ratio	0.52	0.68		0.39	0.48			0.72			0.40	0.77
Uniform Delay, d1	8.0	9.5		7.0	7.6			34.9			32.0	35.4
Progression Factor	0.61	0.40		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.1	0.1		15.9	0.5			11.6			3.3	16.4
Delay (s)	6.0	3.9		22.8	8.1			46.5			35.3	51.8
Level of Service	A	A		C	A			D			D	D
Approach Delay (s)		3.9			8.4			46.5			46.1	
Approach LOS		A			A			D			D	

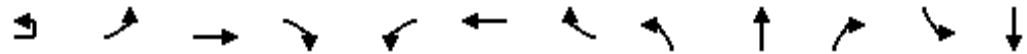
Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘↗	↑↑↗		↘↗	↑↑↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.91		0.97	0.91	
Frbp, ped/bikes	1.00	1.00	0.75	1.00	0.92		1.00	0.98		1.00	0.94	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1574	3167	1060	1583	2823		3072	4404		3072	4192	
Flt Permitted	0.15	1.00	1.00	0.11	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	241	3167	1060	185	2823		3072	4404		3072	4192	
Volume (vph)	354	1163	86	252	563	179	62	2093	116	155	1545	292
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	377	1237	91	268	599	190	66	2227	123	165	1644	311
RTOR Reduction (vph)	0	0	46	0	25	0	0	5	0	0	22	0
Lane Group Flow (vph)	377	1237	45	268	764	0	66	2345	0	165	1933	0
Conf. Peds. (#/hr)	211		160	160		211	310		128	128		310
Conf. Bikes (#/hr)			10			8			9			7
Turn Type	pm+pt		Perm	pm+pt		Prot		Prot		Prot		
Protected Phases	1	6		5	2	3	8		7	4		
Permitted Phases	6		6	2								
Actuated Green, G (s)	49.6	34.6	34.6	49.6	34.6	9.6	43.4		9.6	43.4		
Effective Green, g (s)	50.0	36.0	36.0	50.0	36.0	9.6	44.4		9.6	44.4		
Actuated g/C Ratio	0.42	0.30	0.30	0.42	0.30	0.08	0.37		0.08	0.37		
Clearance Time (s)	3.0	5.4	5.4	3.0	5.4	4.0	5.0		4.0	5.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	256	950	318	240	847	246	1629		246	1551		
v/s Ratio Prot	c0.17	0.39		0.13	0.27	0.02	c0.53		0.05	c0.46		
v/s Ratio Perm	c0.44		0.04	0.33								
v/c Ratio	1.47	1.30	0.14	1.12	0.90	0.27	1.44		0.67	1.25		
Uniform Delay, d1	29.2	42.0	30.7	55.2	40.3	51.9	37.8		53.7	37.8		
Progression Factor	1.30	0.99	1.24	1.00	1.00	0.96	0.94		1.22	0.44		
Incremental Delay, d2	214.6	136.7	0.0	93.0	14.7	0.4	200.0		0.7	111.3		
Delay (s)	252.7	178.1	38.2	148.2	55.0	50.4	235.4		65.9	128.0		
Level of Service	F	F	D	F	D	D	F		E	F		
Approach Delay (s)		187.1			78.6		230.4			123.2		
Approach LOS		F			E		F			F		

Intersection Summary

HCM Average Control Delay	167.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.46		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	118.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↑↑		↔	↑↑↑	↔	↔		↔	↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00		0.91		1.00	0.86	0.86	1.00		1.00	0.97	
Frt	1.00		1.00		1.00	0.96	0.85	1.00		0.85	1.00	
Flt Protected	0.95		1.00		0.95	1.00	1.00	0.95		1.00	0.95	
Satd. Flow (prot)	1583		4538		1583	4142	1218	1583		1417	3072	
Flt Permitted	0.95		1.00		0.95	1.00	1.00	0.95		1.00	0.95	
Satd. Flow (perm)	1583		4538		1583	4142	1218	1583		1417	3072	
Volume (vph)	21	0	1166	22	14	870	906	36	0	46	987	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	22	0	1240	23	15	926	964	38	0	49	1050	0
RTOR Reduction (vph)	0	0	1	0	0	46	403	0	0	47	0	0
Lane Group Flow (vph)	22	0	1262	0	15	1180	261	38	0	2	1050	0
Turn Type	Prot				Prot		Perm	Prot			custom	custom
Protected Phases	5		2		1		6			7		
Permitted Phases							6				7	8
Actuated Green, G (s)	2.0		46.1		2.0	45.2	45.2	4.0		4.0	46.1	
Effective Green, g (s)	3.9		47.1		3.9	47.1	47.1	5.0		5.0	48.0	
Actuated g/C Ratio	0.03		0.39		0.03	0.39	0.39	0.04		0.04	0.40	
Clearance Time (s)	5.9		5.0		5.9	5.9	5.9	5.0		5.0	5.9	
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	51		1781		51	1626	478	66		59	1229	
v/s Ratio Prot	0.01		c0.28		0.01	c0.28		c0.02				
v/s Ratio Perm							0.21			0.00	c0.34	
v/c Ratio	0.43		0.71		0.29	0.73	0.55	0.58		0.03	0.85	
Uniform Delay, d1	57.0		30.7		56.7	31.0	28.2	56.5		55.2	32.8	
Progression Factor	1.19		1.33		1.05	1.64	8.55	1.00		1.00	1.17	
Incremental Delay, d2	0.5		0.2		1.9	1.7	2.7	11.6		0.2	3.8	
Delay (s)	68.6		40.9		61.3	52.4	243.6	68.0		55.4	42.3	
Level of Service	E		D		E	D	F	E		E	D	
Approach Delay (s)			41.4			119.1			60.9			43.3
Approach LOS			D			F			E			D
Intersection Summary												
HCM Average Control Delay			75.8									HCM Level of Service E
HCM Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			120.0									Sum of lost time (s) 12.0
Intersection Capacity Utilization			71.4%									ICU Level of Service C
Analysis Period (min)			15									
c Critical Lane Group												



Movement	SBR
Lane Configurations	7
Ideal Flow (vphpl)	1700
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1417
Flt Permitted	1.00
Satd. Flow (perm)	1417
Volume (vph)	78
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	83
RTOR Reduction (vph)	50
Lane Group Flow (vph)	33
Turn Type	custom
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	46.1
Effective Green, g (s)	48.0
Actuated g/C Ratio	0.40
Clearance Time (s)	5.9
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	567
v/s Ratio Prot	
v/s Ratio Perm	0.02
v/c Ratio	0.06
Uniform Delay, d1	22.1
Progression Factor	2.56
Incremental Delay, d2	0.1
Delay (s)	56.6
Level of Service	E
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑	↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor		0.86	1.00		0.86	1.00	1.00	0.91			0.91	
Frt		1.00	0.85		1.00	0.85	1.00	1.00			0.98	
Flt Protected		1.00	1.00		1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)		5733	1417		5733	1417	1583	4549			4437	
Flt Permitted		1.00	1.00		1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)		5733	1417		5733	1417	1583	4549			4437	
Volume (vph)	0	1613	367	0	1241	398	196	2012	2	0	1714	341
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1663	378	0	1279	410	202	2074	2	0	1767	352
RTOR Reduction (vph)	0	0	3	0	0	8	0	0	0	0	25	0
Lane Group Flow (vph)	0	1663	375	0	1279	402	202	2076	0	0	2094	0
Turn Type		pm+ov			Perm		Prot					
Protected Phases		8	1		4		1	6			2	
Permitted Phases		8	8			4						
Actuated Green, G (s)		34.2	49.2		34.2	34.2	15.0	73.8			53.3	
Effective Green, g (s)		36.2	52.7		36.2	36.2	16.5	75.8			55.3	
Actuated g/C Ratio		0.30	0.44		0.30	0.30	0.14	0.63			0.46	
Clearance Time (s)		6.0	5.5		6.0	6.0	5.5	6.0			6.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)		1729	670		1729	427	218	2873			2045	
v/s Ratio Prot		c0.29	0.08		0.22		c0.13	0.46			c0.47	
v/s Ratio Perm			0.19			0.28						
v/c Ratio		0.96	0.56		0.74	0.94	0.93	0.72			1.02	
Uniform Delay, d1		41.2	25.0		37.7	40.9	51.2	15.0			32.4	
Progression Factor		1.15	1.07		1.00	1.00	1.07	0.77			0.31	
Incremental Delay, d2		10.7	0.7		2.9	30.9	31.5	1.1			13.5	
Delay (s)		58.1	27.4		40.6	71.8	86.4	12.7			23.7	
Level of Service		E	C		D	E	F	B			C	
Approach Delay (s)		52.4			48.1			19.2			23.7	
Approach LOS		D			D			B			C	

Intersection Summary

HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕↕↕		↗	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.99			0.97		1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1609			1606		1583	4527		1583	4507	
Flt Permitted		0.80			0.95		0.08	1.00		0.06	1.00	
Satd. Flow (perm)		1315			1529		136	4527		103	4507	
Volume (vph)	213	181	32	10	48	17	82	1976	69	132	1742	117
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	217	185	33	10	49	17	84	2016	70	135	1778	119
RTOR Reduction (vph)	0	2	0	0	8	0	0	3	0	0	6	0
Lane Group Flow (vph)	0	433	0	0	68	0	84	2083	0	135	1891	0
Turn Type		Perm		Perm		Perm		Perm		Perm		Perm
Protected Phases		4		8		8		2		2		6
Permitted Phases		4		8		2		2		6		6
Actuated Green, G (s)		30.0		30.0		83.4		83.4		83.4		83.4
Effective Green, g (s)		29.0		29.0		83.0		83.0		83.0		83.0
Actuated g/C Ratio		0.24		0.24		0.69		0.69		0.69		0.69
Clearance Time (s)		3.0		3.0		3.6		3.6		3.6		3.6
Vehicle Extension (s)		3.0		3.0		5.0		5.0		5.0		5.0
Lane Grp Cap (vph)		318		370		94		3131		71		3117
v/s Ratio Prot								0.46				0.42
v/s Ratio Perm		c0.33		0.04		0.62				c1.30		
v/c Ratio		1.36		0.18		0.89		0.67		1.90		0.61
Uniform Delay, d1		45.5		36.1		14.9		10.6		18.5		9.8
Progression Factor		1.00		1.00		1.00		1.00		0.65		0.33
Incremental Delay, d2		181.4		1.1		67.0		1.1		422.9		0.3
Delay (s)		226.9		37.2		82.0		11.7		434.9		3.6
Level of Service		F		D		F		B		F		A
Approach Delay (s)		226.9		37.2				14.4				32.2
Approach LOS		F		D				B				C

Intersection Summary

HCM Average Control Delay	42.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.76		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 39: Wilshire Blvd & La Cienega Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑↑		↖	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.93		1.00	0.99		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	1.00		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4104		1583	4509		1583	4472		1583	4400	
Flt Permitted	0.11	1.00		0.12	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	188	4104		194	4509		178	4472		187	4400	
Volume (vph)	165	1922	563	175	1400	38	192	2001	131	54	1560	186
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	176	2045	599	186	1489	40	204	2129	139	57	1660	198
RTOR Reduction (vph)	0	53	0	0	3	0	0	7	0	0	15	0
Lane Group Flow (vph)	176	2591	0	186	1526	0	204	2261	0	57	1843	0
Conf. Peds. (#/hr)	129		199	199		129	103		84	84		103
Conf. Bikes (#/hr)			6			13			4			11
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt		pm+pt			
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	44.9	35.9		42.9	34.9		44.4	37.4		40.8	35.6	
Effective Green, g (s)	43.4	35.4		41.4	34.4		43.4	37.4		39.8	35.6	
Actuated g/C Ratio	0.43	0.35		0.41	0.34		0.43	0.37		0.40	0.36	
Clearance Time (s)	3.0	3.5		3.0	3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	193	1453		178	1551		162	1673		133	1566	
v/s Ratio Prot	0.07	c0.63		c0.07	0.34		c0.08	c0.51		0.02	0.42	
v/s Ratio Perm	0.32			0.36			0.47			0.15		
v/c Ratio	0.91	1.78		1.04	0.98		1.26	1.35		0.43	1.18	
Uniform Delay, d1	22.6	32.3		48.7	32.5		26.2	31.3		25.1	32.2	
Progression Factor	0.85	0.84		1.56	0.95		1.58	0.82		1.00	1.00	
Incremental Delay, d2	27.7	354.1		74.8	17.7		139.1	160.2		0.8	86.7	
Delay (s)	47.0	381.2		150.8	48.5		180.5	185.9		25.9	118.9	
Level of Service	D	F		F	D		F	F		C	F	
Approach Delay (s)		360.4			59.6			185.5			116.1	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	201.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	132.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑↑↑		↕	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes		0.96			1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.99		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1507			1604		1583	4487		1583	4499	
Flt Permitted		0.86			0.35		0.06	1.00		0.06	1.00	
Satd. Flow (perm)		1311			567		104	4487		104	4499	
Volume (vph)	129	317	271	116	106	19	57	2102	116	25	2090	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	334	285	122	112	20	60	2213	122	26	2200	63
RTOR Reduction (vph)	0	4	0	0	3	0	0	6	0	0	3	0
Lane Group Flow (vph)	0	751	0	0	251	0	60	2329	0	26	2260	0
Conf. Peds. (#/hr)	29		64	64		29	102		42	42		102
Conf. Bikes (#/hr)			4			5			5			15
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.0			29.0		64.2	64.2		64.2	64.2	
Effective Green, g (s)		28.0			28.0		64.0	64.0		64.0	64.0	
Actuated g/C Ratio		0.28			0.28		0.64	0.64		0.64	0.64	
Clearance Time (s)		3.0			3.0		3.8	3.8		3.8	3.8	
Vehicle Extension (s)		3.0			3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		367			159		67	2872		67	2879	
v/s Ratio Prot								0.52			0.50	
v/s Ratio Perm		c0.57			0.44		c0.58			0.25		
v/c Ratio		2.05			1.58		0.90	0.81		0.39	0.79	
Uniform Delay, d1		36.0			36.0		15.2	13.5		8.6	13.0	
Progression Factor		1.00			1.00		1.00	1.00		1.18	1.06	
Incremental Delay, d2		479.9			288.6		83.2	2.6		1.5	0.2	
Delay (s)		515.9			324.6		98.3	16.1		11.7	14.0	
Level of Service		F			F		F	B		B	B	
Approach Delay (s)		515.9			324.6			18.1			13.9	
Approach LOS		F			F			B			B	

Intersection Summary			
HCM Average Control Delay	96.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	108.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶		↶	↶↶↶		↶	↶↶↶	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4525		1583	4531		1583	4510		1583	4438	
Flt Permitted	0.11	1.00		0.10	1.00		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	190	4525		171	4531		230	4510		230	4438	
Volume (vph)	360	2450	93	121	1614	46	138	1800	113	258	1780	351
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	387	2634	100	130	1735	49	148	1935	122	277	1914	377
RTOR Reduction (vph)	0	4	0	0	3	0	0	7	0	0	18	0
Lane Group Flow (vph)	387	2730	0	130	1781	0	148	2050	0	277	2273	0
Turn Type	Perm			pm+pt			pm+pt			pm+pt		
Protected Phases		6		5	2		3	8		7	4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	34.0	34.0		43.0	43.0		33.0	28.0		33.0	28.0	
Effective Green, g (s)	35.0	35.0		44.0	44.0		34.0	29.0		34.0	29.0	
Actuated g/C Ratio	0.39	0.39		0.49	0.49		0.38	0.32		0.38	0.32	
Clearance Time (s)	5.0	5.0		3.5	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	1760		162	2215		162	1453		162	1430	
v/s Ratio Prot		0.60		0.04	c0.39		0.05	0.45		c0.09	0.51	
v/s Ratio Perm	c2.03			0.35			0.29			c0.55		
v/c Ratio	5.23	1.55		0.80	0.80		0.91	1.41		1.71	1.59	
Uniform Delay, d1	27.5	27.5		43.7	19.4		44.3	30.5		44.7	30.5	
Progression Factor	1.36	1.36		1.00	1.00		1.16	0.58		1.00	1.00	
Incremental Delay, d2	1906.1	248.2		24.1	3.2		7.6	185.1		344.3	268.7	
Delay (s)	1943.4	285.6		67.9	22.6		58.8	202.9		389.0	299.2	
Level of Service	F	F		E	C		E	F		F	F	
Approach Delay (s)		491.2			25.7			193.3			308.9	
Approach LOS		F			C			F			F	

Intersection Summary

HCM Average Control Delay	285.6	HCM Level of Service	F
HCM Volume to Capacity ratio	3.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	133.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↗	↕		↗	↕		↗	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.97		1.00	0.98		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3083		1583	3099		1583	4475		1583	4477	
Flt Permitted	0.26	1.00		0.13	1.00		0.12	1.00		0.14	1.00	
Satd. Flow (perm)	436	3083		222	3099		202	4475		230	4477	
Volume (vph)	169	1341	287	174	770	128	336	1795	222	144	1880	226
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	182	1442	309	187	828	138	361	1930	239	155	2022	243
RTOR Reduction (vph)	0	20	0	0	2	0	0	17	0	0	16	0
Lane Group Flow (vph)	182	1731	0	187	964	0	361	2152	0	155	2249	0
Turn Type	Perm		pm+pt		pm+pt		Perm					
Protected Phases	8		7		4		1		6		2	
Permitted Phases	8		4		6		2					
Actuated Green, G (s)	25.0	25.0	38.0		38.0	42.0		42.0	28.0		28.0	
Effective Green, g (s)	26.0	26.0	39.0		39.0	43.0		43.0	29.0		29.0	
Actuated g/C Ratio	0.29	0.29	0.43		0.43	0.48		0.48	0.32		0.32	
Clearance Time (s)	5.0	5.0	3.0		5.0	4.0		5.0	5.0		5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	126	891	232		1343	250		2138	74		1443	
v/s Ratio Prot	c0.56		0.08		c0.31	c0.16		0.48	0.50			
v/s Ratio Perm	0.42		0.27		0.53		c0.67					
v/c Ratio	1.44	1.94	0.81		0.72	1.44		1.01	2.09		1.56	
Uniform Delay, d1	32.0	32.0	41.3		21.0	42.2		23.5	30.5		30.5	
Progression Factor	1.00	1.00	1.77		1.73	1.00		1.00	0.68		0.67	
Incremental Delay, d2	238.9	428.4	12.6		2.2	221.0		21.0	496.7		251.6	
Delay (s)	270.9	460.4	86.0		38.4	263.2		44.5	517.4		271.9	
Level of Service	F		F		D	F		D	F		F	
Approach Delay (s)	442.6		46.2		75.7		287.6					
Approach LOS	F		D		E		F					

Intersection Summary

HCM Average Control Delay	223.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	142.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.98	
Flpb, ped/bikes	0.96	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1525	3061		1569	2988		1583	2992		1583	3048	
Flt Permitted	0.22	1.00		0.10	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	353	3061		166	2988		162	2992		160	3048	
Volume (vph)	140	1110	158	27	750	147	86	895	215	257	996	111
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	144	1144	163	28	773	152	89	923	222	265	1027	114
RTOR Reduction (vph)	0	9	0	0	14	0	0	17	0	0	7	0
Lane Group Flow (vph)	144	1298	0	28	911	0	89	1128	0	265	1134	0
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	59.6	59.6		59.6	59.6		49.1	49.1		49.1	49.1	
Effective Green, g (s)	61.5	61.5		61.5	61.5		50.5	50.5		50.5	50.5	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.42	0.42		0.42	0.42	
Clearance Time (s)	5.9	5.9		5.9	5.9		5.4	5.4		5.4	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	181	1569		85	1531		68	1259		67	1283	
v/s Ratio Prot		c0.42			0.31			0.38			0.37	
v/s Ratio Perm	0.41			0.17			0.55			c1.66		
v/c Ratio	0.80	0.83		0.33	0.60		1.31	0.90		3.96	0.88	
Uniform Delay, d1	24.1	24.8		17.2	20.5		34.8	32.3		34.8	32.0	
Progression Factor	1.00	1.00		0.65	0.63		0.82	0.83		1.00	1.00	
Incremental Delay, d2	29.3	5.1		3.1	0.5		203.1	8.7		1364.9	9.1	
Delay (s)	53.4	29.9		14.2	13.5		231.7	35.5		1399.6	41.1	
Level of Service	D	C		B	B		F	D		F	D	
Approach Delay (s)		32.2			13.5			49.7			297.2	
Approach LOS		C			B			D			F	

Intersection Summary

HCM Average Control Delay	106.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.23		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.7%	ICU Level of Service	H
Analysis Period (min)	15		

























c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1583	4513		1583	4542			1614			1634	
Flt Permitted	0.08	1.00		0.06	1.00			0.97			0.98	
Satd. Flow (perm)	139	4513		100	4542			1568			1611	
Volume (vph)	46	2343	136	71	1712	21	14	104	30	14	215	33
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	49	2519	146	76	1841	23	15	112	32	15	231	35
RTOR Reduction (vph)	0	6	0	0	1	0	0	5	0	0	5	0
Lane Group Flow (vph)	49	2659	0	76	1863	0	0	155	0	0	276	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	68.0	68.0		68.0	68.0			26.0			26.0	
Effective Green, g (s)	67.0	67.0		67.0	67.0			25.0			25.0	
Actuated g/C Ratio	0.67	0.67		0.67	0.67			0.25			0.25	
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0			3.0			3.0	
Lane Grp Cap (vph)	93	3024		67	3043			392			403	
v/s Ratio Prot		0.59			0.41							
v/s Ratio Perm	0.35			c0.76				0.10			c0.17	
v/c Ratio	0.53	0.88		1.13	0.61			0.39			0.68	
Uniform Delay, d1	8.4	13.3		16.5	9.2			31.2			33.9	
Progression Factor	0.54	0.60		0.87	0.50			1.00			1.00	
Incremental Delay, d2	1.9	0.4		94.1	0.2			3.0			9.1	
Delay (s)	6.5	8.4		108.4	4.8			34.2			43.0	
Level of Service	A	A		F	A			C			D	
Approach Delay (s)		8.4			8.9			34.2			43.0	
Approach LOS		A			A			C			D	

Intersection Summary

HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3167	1417	1583	4550	1417	1583	1667	1417	1583	1643	
Flt Permitted	0.21	1.00	1.00	0.21	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	351	3167	1417	351	4550	1417	1583	1667	1417	1583	1643	
Volume (vph)	253	847	175	111	989	58	83	656	33	228	644	67
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	269	901	186	118	1052	62	88	698	35	243	685	71
RTOR Reduction (vph)	0	0	127	0	0	42	0	0	12	0	6	0
Lane Group Flow (vph)	269	901	59	118	1052	20	88	698	23	243	750	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4			4		1	2		1	6	
Permitted Phases	4		4	4		4			2			
Actuated Green, G (s)	18.0	18.0	18.0	18.0	18.0	18.0	4.0	24.2	24.2	4.0	24.2	
Effective Green, g (s)	19.0	19.0	19.0	19.0	19.0	19.0	4.0	25.0	25.0	4.0	25.0	
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32	0.32	0.07	0.42	0.42	0.07	0.42	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.8	4.8	4.0	4.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	1003	449	111	1441	449	106	695	590	106	685	
v/s Ratio Prot		0.28			0.23		0.06	0.42		c0.15	c0.46	
v/s Ratio Perm	c0.77		0.04	0.34		0.01			0.02			
v/c Ratio	2.42	0.90	0.13	1.06	0.73	0.04	0.83	1.00	0.04	2.29	1.09	
Uniform Delay, d1	20.5	19.6	14.6	20.5	18.2	14.2	27.7	17.5	10.4	28.0	17.5	
Progression Factor	1.00	1.00	1.00	1.29	1.07	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	667.1	12.5	0.6	96.9	2.8	0.2	39.8	35.2	0.1	610.3	63.0	
Delay (s)	687.6	32.0	15.2	123.3	22.4	14.4	67.4	52.7	10.5	638.3	80.5	
Level of Service	F	C	B	F	C	B	E	D	B	F	F	
Approach Delay (s)		159.8			31.7			52.5			216.2	
Approach LOS		F			C			D			F	
Intersection Summary												
HCM Average Control Delay		116.8					HCM Level of Service		F			
HCM Volume to Capacity ratio		1.72										
Actuated Cycle Length (s)		60.0					Sum of lost time (s)		12.0			
Intersection Capacity Utilization		103.1%					ICU Level of Service		G			
Analysis Period (min)		15										
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Fr _t	1.00	0.99		1.00	1.00		1.00	0.97		1.00	0.99	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4501		1583	4532		1583	3075		1583	3130	
Fl _t Permitted	0.10	1.00		0.10	1.00		0.13	1.00		0.17	1.00	
Satd. Flow (perm)	161	4501		161	4532		218	3075		282	3130	
Volume (vph)	153	2431	189	223	1573	43	193	619	148	73	737	62
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	158	2506	195	230	1622	44	199	638	153	75	760	64
RTOR Reduction (vph)	0	9	0	0	3	0	0	20	0	0	6	0
Lane Group Flow (vph)	158	2692	0	230	1663	0	199	771	0	75	818	0
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt		pm+pt			
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	50.4	42.4		50.4	42.4		39.6	31.6		35.6	29.6	
Effective Green, g (s)	48.4	41.4		48.4	41.4		37.6	30.6		33.6	28.6	
Actuated g/C Ratio	0.48	0.41		0.48	0.41		0.38	0.31		0.34	0.29	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	177	1863		177	1876		178	941		160	895	
v/s Ratio Prot	0.06	c0.60		c0.09	0.37		c0.08	0.25		0.02	0.26	
v/s Ratio Perm	0.37			0.54			c0.34			0.13		
v/c Ratio	0.89	1.45		1.30	0.89		1.12	0.82		0.47	0.91	
Uniform Delay, d ₁	20.1	29.3		48.7	27.1		26.9	32.1		24.4	34.5	
Progression Factor	1.88	1.48		1.68	1.79		1.00	1.00		1.00	1.00	
Incremental Delay, d ₂	5.5	200.6		163.6	5.4		102.7	7.9		0.8	15.3	
Delay (s)	43.3	243.9		245.3	53.9		129.6	40.0		25.2	49.8	
Level of Service	D	F		F	D		F	D		C	D	
Approach Delay (s)		232.8			77.1			58.0			47.7	
Approach LOS		F			E			E			D	

Intersection Summary

HCM Average Control Delay	137.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	121.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00		1.00	0.96		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4517		1583	4531		1583	3051		1583	3023	
Flt Permitted	0.11	1.00		0.10	1.00		0.15	1.00		0.17	1.00	
Satd. Flow (perm)	183	4517		173	4531		256	3051		282	3023	
Volume (vph)	87	2644	133	388	1516	44	202	840	272	57	683	295
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	93	2813	141	413	1613	47	215	894	289	61	727	314
RTOR Reduction (vph)	0	6	0	0	3	0	0	33	0	0	53	0
Lane Group Flow (vph)	93	2948	0	413	1657	0	215	1150	0	61	988	0
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt		pm+pt			
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	43.2	37.4		47.6	39.6		35.0	27.0		30.2	24.6	
Effective Green, g (s)	41.2	36.4		45.6	38.6		33.0	26.0		28.2	23.6	
Actuated g/C Ratio	0.46	0.40		0.51	0.43		0.37	0.29		0.31	0.26	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	158	1827		197	1943		197	881		155	793	
v/s Ratio Prot	0.03	0.65		c0.16	0.37		c0.08	c0.38		0.02	0.33	
v/s Ratio Perm	0.24			c0.90			0.31			0.10		
v/c Ratio	0.59	1.61		2.10	0.85		1.09	1.31		0.39	1.25	
Uniform Delay, d1	16.9	26.8		43.7	23.1		43.7	32.0		25.2	33.2	
Progression Factor	1.00	1.00		1.03	0.90		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.6	278.7		499.3	1.8		90.6	145.8		0.6	121.1	
Delay (s)	20.5	305.5		544.5	22.6		134.3	177.8		25.8	154.3	
Level of Service	C	F		F	C		F	F		C	F	
Approach Delay (s)		296.8			126.6			171.1			147.2	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	205.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	141.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗		↗	↗	↗	↗	↗↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91			0.91		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.99			0.99		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	4518			4522		1583	1667	1417	1583	3077	
Flt Permitted	0.09	1.00			1.00		0.22	1.00	1.00	0.35	1.00	
Satd. Flow (perm)	150	4518			4522		371	1667	1417	576	3077	
Volume (vph)	242	2607	128	0	1842	79	115	390	19	14	496	116
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	257	2773	136	0	1960	84	122	415	20	15	528	123
RTOR Reduction (vph)	0	4	0	0	5	0	0	0	13	0	20	0
Lane Group Flow (vph)	257	2905	0	0	2039	0	122	415	7	15	631	0
Turn Type	pm+pt			pm+pt			pm+pt			Perm	pm+pt	
Protected Phases	5	2		1	6		3	8		8	7	4
Permitted Phases	2			6			8			8	4	
Actuated Green, G (s)	51.5	51.5			41.5		42.5	37.2	37.2	35.0	32.7	
Effective Green, g (s)	50.5	50.5			40.5		41.5	36.2	36.2	33.0	31.7	
Actuated g/C Ratio	0.50	0.50			0.40		0.42	0.36	0.36	0.33	0.32	
Clearance Time (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Vehicle Extension (s)	2.0	5.0			5.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	162	2282			1831		224	603	513	203	975	
v/s Ratio Prot	c0.10	0.64			0.45		c0.03	c0.25		0.00	0.21	
v/s Ratio Perm	c0.71						0.19		0.01	0.02		
v/c Ratio	1.59	1.27			1.11		0.54	0.69	0.01	0.07	0.65	
Uniform Delay, d1	25.0	24.8			29.8		20.1	27.1	20.5	23.2	29.3	
Progression Factor	0.99	1.11			1.79		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	285.8	125.6			55.8		1.5	6.3	0.1	0.1	3.3	
Delay (s)	310.4	153.1			109.0		21.6	33.4	20.5	23.3	32.7	
Level of Service	F	F			F		C	C	C	C	C	
Approach Delay (s)		165.9			109.0			30.4			32.5	
Approach LOS		F			F			C			C	

Intersection Summary

HCM Average Control Delay	122.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	2227		1118	2223		1118	2199		1118	2216	
Flt Permitted	0.07	1.00		0.07	1.00		0.38	1.00		0.25	1.00	
Satd. Flow (perm)	77	2227		77	2223		447	2199		293	2216	
Volume (vph)	13	2317	58	92	1890	72	91	477	58	100	374	23
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	13	2389	60	95	1948	74	94	492	60	103	386	24
RTOR Reduction (vph)	0	2	0	0	3	0	0	6	0	0	5	0
Lane Group Flow (vph)	13	2447	0	95	2019	0	94	546	0	103	405	0
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	60.5	60.5		60.5	60.5		20.8	20.8		20.8	20.8	
Effective Green, g (s)	61.0	61.0		61.0	61.0		21.0	21.0		21.0	21.0	
Actuated g/C Ratio	0.68	0.68		0.68	0.68		0.23	0.23		0.23	0.23	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	52	1509		52	1507		104	513		68	517	
v/s Ratio Prot		1.10			0.91			0.25			0.18	
v/s Ratio Perm	0.17			c1.23			0.21			c0.35		
v/c Ratio	0.25	1.62		1.83	1.34		0.90	1.06		1.51	0.78	
Uniform Delay, d1	5.6	14.5		14.5	14.5		33.5	34.5		34.5	32.4	
Progression Factor	0.47	0.38		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	280.0		437.2	157.5		65.0	57.9		293.2	11.2	
Delay (s)	3.7	285.5		451.7	172.0		98.5	92.4		327.7	43.6	
Level of Service	A	F		F	F		F	F		F	D	
Approach Delay (s)		284.0			184.5			93.3			100.6	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	209.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	158.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						0.95			0.95	
Frbp, ped/bikes		0.99						0.99			1.00	
Flpb, ped/bikes		1.00						1.00			1.00	
Frt		0.99						0.98			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		3047						3075			3129	
Flt Permitted		0.99						1.00			0.82	
Satd. Flow (perm)		3047						3075			2594	
Volume (vph)	257	518	76	0	0	0	0	343	51	71	423	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	279	563	83	0	0	0	0	373	55	77	460	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	918	0	0	0	0	0	409	0	0	537	0
Conf. Peds. (#/hr)	5		38					63		59	59	63
Conf. Bikes (#/hr)			5							1		1
Turn Type	Perm						Perm					
Protected Phases		2						8			4	
Permitted Phases	2								4			
Actuated Green, G (s)		37.0						17.0			17.0	
Effective Green, g (s)		36.0						16.0			16.0	
Actuated g/C Ratio		0.60						0.27			0.27	
Clearance Time (s)		3.0						3.0			3.0	
Vehicle Extension (s)		5.0						3.0			3.0	
Lane Grp Cap (vph)		1828						820			692	
v/s Ratio Prot								0.13				
v/s Ratio Perm		0.30									c0.21	
v/c Ratio		0.50						0.50			0.78	
Uniform Delay, d1		6.9						18.6			20.3	
Progression Factor		0.73						1.00			1.00	
Incremental Delay, d2		0.6						2.2			8.3	
Delay (s)		5.6						20.8			28.7	
Level of Service		A						C			C	
Approach Delay (s)		5.6			0.0			20.8			28.7	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM Average Control Delay		15.6			HCM Level of Service			B				
HCM Volume to Capacity ratio		0.59										
Actuated Cycle Length (s)		60.0			Sum of lost time (s)			8.0				
Intersection Capacity Utilization		66.1%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑				↖		↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0				4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91				1.00		1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99				0.94		1.00	0.92
Flpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		0.95	1.00
Frt	1.00	1.00		1.00	0.98				0.86		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00				1.00		0.95	1.00
Satd. Flow (prot)	1583	4522		1583	4398				1355		1513	1302
Flt Permitted	0.95	1.00		0.95	1.00				1.00		0.95	1.00
Satd. Flow (perm)	1583	4522		1583	4398				1355		1513	1302
Volume (vph)	146	1958	46	36	1701	288	0	0	87	350	10	229
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	152	2040	48	38	1772	300	0	0	91	365	10	239
RTOR Reduction (vph)	0	2	0	0	23	0	0	0	66	0	0	124
Lane Group Flow (vph)	152	2086	0	38	2049	0	0	0	25	0	375	115
Conf. Peds. (#/hr)	26		44	44		26	50		36	36		50
Conf. Bikes (#/hr)			5			6						3
Turn Type	Prot			Prot				custom	Perm		Perm	
Protected Phases	5	2		1	6						4	
Permitted Phases								8	4			4
Actuated Green, G (s)	11.6	58.4		3.6	50.4			29.0			29.0	29.0
Effective Green, g (s)	10.6	57.4		2.6	49.4			28.0			28.0	28.0
Actuated g/C Ratio	0.11	0.57		0.03	0.49			0.28			0.28	0.28
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Vehicle Extension (s)	2.0	5.0		2.0	5.0			3.0			3.0	3.0
Lane Grp Cap (vph)	168	2596		41	2173			379			424	365
v/s Ratio Prot	c0.10	0.46		0.02	c0.47							
v/s Ratio Perm								0.02			0.25	0.09
v/c Ratio	0.90	0.80		0.93	0.94			0.07			0.88	0.32
Uniform Delay, d1	44.2	16.8		48.6	24.0			26.4			34.5	28.4
Progression Factor	1.00	1.00		0.62	1.72			1.00			1.00	1.00
Incremental Delay, d2	42.1	2.7		24.5	1.2			0.3			22.6	2.3
Delay (s)	86.3	19.6		54.5	42.5			26.8			57.1	30.7
Level of Service	F	B		D	D			C			E	C
Approach Delay (s)		24.1			42.7			26.8			46.8	
Approach LOS		C			D			C			D	
Intersection Summary												
HCM Average Control Delay			34.7			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.92									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			92.2%			ICU Level of Service		F				
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	2229		1118	2228		1118	2164		1118	2198	
Flt Permitted	0.07	1.00		0.07	1.00		0.20	1.00		0.16	1.00	
Satd. Flow (perm)	83	2229		83	2228		237	2164		188	2198	
Volume (vph)	51	2115	43	76	1895	42	79	826	225	57	582	72
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	53	2203	45	79	1974	44	82	860	234	59	606	75
RTOR Reduction (vph)	0	1	0	0	2	0	0	7	0	0	11	0
Lane Group Flow (vph)	53	2247	0	79	2016	0	82	1088	0	59	670	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	56.5	56.5		56.5	56.5		24.8	24.8		24.8	24.8	
Effective Green, g (s)	57.0	57.0		57.0	57.0		25.0	25.0		25.0	25.0	
Actuated g/C Ratio	0.63	0.63		0.63	0.63		0.28	0.28		0.28	0.28	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	53	1412		53	1411		66	601		52	611	
v/s Ratio Prot	c1.01				0.90		c0.50				0.30	
v/s Ratio Perm	0.64		0.96				0.35		0.31			
v/c Ratio	1.00	1.59		1.49	1.43		1.24	1.81		1.13	1.10	
Uniform Delay, d1	16.5	16.5		16.5	16.5		32.5	32.5		32.5	32.5	
Progression Factor	1.00	1.00		0.62	0.62		0.53	0.52		1.00	1.00	
Incremental Delay, d2	123.6	269.4		229.7	193.4		120.5	364.9		166.6	65.7	
Delay (s)	140.1	285.9		239.9	203.6		137.7	381.7		199.1	98.2	
Level of Service	F	F		F	F		F	F		F	F	
Approach Delay (s)	282.5				205.0		364.7				106.3	
Approach LOS	F				F		F				F	

Intersection Summary

HCM Average Control Delay	251.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	162.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕		↗	↕	↖		↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00		0.95	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1118	2203		1118	2226		1118	2235	1000		2216	
Flt Permitted	0.18	1.00		0.08	1.00		0.23	1.00	1.00		1.00	
Satd. Flow (perm)	214	2203		90	2226		267	2235	1000		2216	
Volume (vph)	116	1666	180	70	1039	30	82	917	192	0	643	40
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	122	1754	189	74	1094	32	86	965	202	0	677	42
RTOR Reduction (vph)	0	9	0	0	2	0	0	0	11	0	5	0
Lane Group Flow (vph)	122	1934	0	74	1124	0	86	965	191	0	714	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	51.5	51.5		51.5	51.5		29.8	29.8	29.8		29.8	
Effective Green, g (s)	52.0	52.0		52.0	52.0		30.0	30.0	30.0		30.0	
Actuated g/C Ratio	0.58	0.58		0.58	0.58		0.33	0.33	0.33		0.33	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2	4.2		4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	124	1273		52	1286		89	745	333		739	
v/s Ratio Prot	c0.88		0.50		0.50		c0.43		0.32		0.32	
v/s Ratio Perm	0.57		0.82		0.82		0.32		0.19		0.19	
v/c Ratio	0.98	1.52		1.42	0.87		0.97	1.30	0.57		0.97	
Uniform Delay, d1	18.6	19.0		19.0	16.2		29.5	30.0	24.7		29.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	76.6	237.8		271.9	8.4		86.5	142.8	7.0		4.7	
Delay (s)	95.2	256.8		290.9	24.7		116.0	172.8	31.7		18.3	
Level of Service	F	F		F	C		F	F	C		B	
Approach Delay (s)	247.2		41.1		41.1		146.1		146.1		18.3	
Approach LOS	F		D		D		F		F		B	

Intersection Summary

HCM Average Control Delay	144.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	141.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						0.95			0.95	
Frbp, ped/bikes		1.00						0.97			1.00	
Flpb, ped/bikes		0.99						1.00			1.00	
Frt		0.97						0.98			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		2991						2990			3142	
Flt Permitted		0.99						1.00			0.64	
Satd. Flow (perm)		2991						2990			2020	
Volume (vph)	159	446	169	0	0	0	0	915	176	97	824	0
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	185	519	197	0	0	0	0	1064	205	113	958	0
RTOR Reduction (vph)	0	43	0	0	0	0	0	27	0	0	0	0
Lane Group Flow (vph)	0	858	0	0	0	0	0	1242	0	0	1071	0
Conf. Peds. (#/hr)	60								223	223		
Conf. Bikes (#/hr)			1							3		
Turn Type	Perm						Perm					
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		21.0						33.0			33.0	
Effective Green, g (s)		20.0						32.0			32.0	
Actuated g/C Ratio		0.33						0.53			0.53	
Clearance Time (s)		3.0						3.0			3.0	
Vehicle Extension (s)		3.0						3.0			3.0	
Lane Grp Cap (vph)		997						1595			1077	
v/s Ratio Prot								0.42				
v/s Ratio Perm		0.29									c0.53	
v/c Ratio		0.86						0.78			0.99	
Uniform Delay, d1		18.7						11.2			13.9	
Progression Factor		1.40						1.00			1.00	
Incremental Delay, d2		5.3						3.8			26.1	
Delay (s)		31.6						15.0			40.0	
Level of Service		C						B			D	
Approach Delay (s)		31.6			0.0			15.0			40.0	
Approach LOS		C			A			B			D	
Intersection Summary												
HCM Average Control Delay			27.9					HCM Level of Service			C	
HCM Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)		8.0		
Intersection Capacity Utilization			99.4%					ICU Level of Service		F		
Analysis Period (min)			15									
c	Critical Lane Group											



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖		↖	↖↖↖		↖	↖↖	↖		↖↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00		0.95	1.00
Frbp, ped/bikes	1.00	0.97		1.00	0.98		1.00	1.00	0.80		1.00	0.84
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1583	4347		1583	4394		1583	3167	1133		3167	1189
Flt Permitted	0.09	1.00		0.09	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	152	4347		149	4394		1583	3167	1133		3167	1189
Volume (vph)	133	2103	222	206	1632	137	285	995	80	0	945	353
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	141	2237	236	219	1736	146	303	1059	85	0	1005	376
RTOR Reduction (vph)	0	13	0	0	10	0	0	0	56	0	0	123
Lane Group Flow (vph)	141	2460	0	219	1872	0	303	1059	29	0	1005	253
Conf. Peds. (#/hr)	216		278	278		216	112		142	142		112
Conf. Bikes (#/hr)			9			5			5			3
Turn Type	pm+pt			pm+pt			Prot		Perm			Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases	2			6				8				4
Actuated Green, G (s)	53.3	45.0		54.7	45.7		8.9	34.9	34.9		22.9	22.9
Effective Green, g (s)	51.3	44.0		52.7	44.7		8.0	34.0	34.0		22.0	22.0
Actuated g/C Ratio	0.52	0.45		0.54	0.46		0.08	0.35	0.35		0.22	0.22
Clearance Time (s)	3.0	3.0		3.0	3.0		3.1	3.1	3.1		3.1	3.1
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	186	1952		197	2004		129	1099	393		711	267
v/s Ratio Prot	0.06	c0.57		c0.09	0.43		c0.19	0.33			c0.32	
v/s Ratio Perm	0.34			0.51					0.03			0.21
v/c Ratio	0.76	1.26		1.11	0.93		2.35	0.96	0.08		1.41	0.95
Uniform Delay, d1	18.4	27.0		47.2	25.3		45.0	31.4	21.5		38.0	37.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	14.5	121.5		97.3	9.6		630.4	19.7	0.4		194.4	43.5
Delay (s)	32.8	148.5		144.5	34.9		675.4	51.1	21.8		232.4	80.9
Level of Service	C	F		F	C		F	D	C		F	F
Approach Delay (s)		142.3			46.3			180.1			191.1	
Approach LOS		F			D			F			F	

Intersection Summary

HCM Average Control Delay	131.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	98.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	124.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕		↕	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.96			0.97		1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3011			3032		1583	3139		1583	3148	
Flt Permitted		0.83			0.72		0.09	1.00		0.09	1.00	
Satd. Flow (perm)		2526			2208		146	3139		148	3148	
Volume (vph)	62	230	114	81	193	72	84	1188	75	68	1198	50
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	68	253	125	89	212	79	92	1305	82	75	1316	55
RTOR Reduction (vph)	0	45	0	0	26	0	0	4	0	0	3	0
Lane Group Flow (vph)	0	401	0	0	354	0	92	1383	0	75	1368	0
Turn Type		Perm		Perm		pm+pt		pm+pt		pm+pt		pm+pt
Protected Phases		4		8		5		2		1		6
Permitted Phases		4		8		2				6		
Actuated Green, G (s)		29.0		29.0		52.5		46.6		51.5		46.1
Effective Green, g (s)		28.0		28.0		50.5		45.6		49.5		45.1
Actuated g/C Ratio		0.31		0.31		0.56		0.51		0.55		0.50
Clearance Time (s)		3.0		3.0		3.0		3.0		3.0		3.0
Vehicle Extension (s)		3.0		3.0		2.0		5.0		2.0		5.0
Lane Grp Cap (vph)		786		687		160		1590		152		1577
v/s Ratio Prot						c0.03		c0.44		0.02		0.43
v/s Ratio Perm		0.16		c0.16		0.29				0.25		
v/c Ratio		0.51		0.52		0.57		0.87		0.49		0.87
Uniform Delay, d1		25.4		25.4		14.5		19.6		14.3		19.8
Progression Factor		1.00		1.00		1.00		1.00		1.00		1.00
Incremental Delay, d2		2.4		0.7		3.1		6.8		0.9		6.7
Delay (s)		27.7		26.1		17.6		26.3		15.2		26.5
Level of Service		C		C		B		C		B		C
Approach Delay (s)		27.7		26.1				25.8				25.9
Approach LOS		C		C				C				C

Intersection Summary

HCM Average Control Delay	26.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑			↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95			0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.95			0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1583	4529		1583	4550		1583	3012			3085	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1583	4529		1583	4550		1583	3012			3085	
Volume (vph)	64	2985	94	19	2352	0	5	298	143	0	625	130
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	67	3109	98	20	2450	0	5	310	149	0	651	135
RTOR Reduction (vph)	0	3	0	0	0	0	0	64	0	0	20	0
Lane Group Flow (vph)	67	3204	0	20	2450	0	5	395	0	0	766	0
Turn Type	Prot		Prot		Split							
Protected Phases	1!	2!		5!	6!		8	8			7	
Permitted Phases												
Actuated Green, G (s)	6.6	32.7		4.6	33.7		13.7	13.7			22.0	
Effective Green, g (s)	6.1	32.2		4.6	33.7		13.7	13.7			22.0	
Actuated g/C Ratio	0.07	0.36		0.05	0.37		0.15	0.15			0.24	
Clearance Time (s)	3.5	3.5		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	107	1620		81	1704		241	458			754	
v/s Ratio Prot	c0.04	c0.71		0.01	0.54		0.00	c0.13			c0.25	
v/s Ratio Perm												
v/c Ratio	0.63	1.98		0.25	1.44		0.02	0.86			1.02	
Uniform Delay, d1	40.8	28.9		41.0	28.1		32.4	37.2			34.0	
Progression Factor	1.25	0.51		1.52	0.31		1.00	1.00			1.00	
Incremental Delay, d2	1.0	440.1		0.1	197.3		0.0	15.2			36.9	
Delay (s)	52.0	454.9		62.5	206.0		32.5	52.5			70.9	
Level of Service	D	F		E	F		C	D			E	
Approach Delay (s)		446.6			204.9			52.3			70.9	
Approach LOS		F			F			D			E	

Intersection Summary

HCM Average Control Delay	292.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	97.4%	ICU Level of Service	F
Analysis Period (min)	15		

- ! Phase conflict between lane groups.
- c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↑	↑↑↑		↑	↑↑		↑	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt		0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4514		1583	4518		1583	3161		1583	3167	
Flt Permitted		1.00		0.95	1.00		0.18	1.00		0.18	1.00	
Satd. Flow (perm)		4514		1583	4518		303	3161		303	3167	
Volume (vph)	0	2964	164	21	2222	110	106	810	10	7	908	0
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	3056	169	22	2291	113	109	835	10	7	936	0
RTOR Reduction (vph)	0	6	0	0	6	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	3219	0	22	2398	0	109	844	0	7	936	0
Turn Type				Prot			Perm			Perm		
Protected Phases		2!		5!	6		7		7		7	
Permitted Phases							7			7		
Actuated Green, G (s)		32.7		4.6	33.7		22.0	22.0		22.0	22.0	
Effective Green, g (s)		32.2		4.6	33.7		22.0	22.0		22.0	22.0	
Actuated g/C Ratio		0.36		0.05	0.37		0.24	0.24		0.24	0.24	
Clearance Time (s)		3.5		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1615		81	1692		74	773		74	774	
v/s Ratio Prot		c0.71		c0.01	0.53			0.27			0.30	
v/s Ratio Perm							c0.36			0.02		
v/c Ratio		1.99		0.27	1.42		1.47	1.09		0.09	1.21	
Uniform Delay, d1		28.9		41.1	28.1		34.0	34.0		26.3	34.0	
Progression Factor		0.28		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		447.0		1.8	191.4		272.1	60.4		2.5	106.1	
Delay (s)		455.2		42.9	219.6		306.1	94.4		28.8	140.1	
Level of Service		F		D	F		F	F		C	F	
Approach Delay (s)		455.2			218.0			118.6			139.3	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	296.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	29.7
Intersection Capacity Utilization	112.7%	ICU Level of Service	H
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕		↕	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0		4.0	4.0	
Lane Util. Factor		0.95						0.95		1.00	0.95	
Frbp, ped/bikes		0.99						0.94		1.00	1.00	
Flpb, ped/bikes		0.92						1.00		0.83	1.00	
Frt		0.99						0.97		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		2845						2912		1312	3167	
Flt Permitted		0.99						1.00		0.44	1.00	
Satd. Flow (perm)		2845						2912		602	3167	
Volume (vph)	182	575	31	0	0	0	0	333	67	94	626	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	192	605	33	0	0	0	0	351	71	99	659	0
RTOR Reduction (vph)	0	5	0	0	0	0	0	28	0	0	0	0
Lane Group Flow (vph)	0	825	0	0	0	0	0	394	0	99	659	0
Conf. Peds. (#/hr)	173		248	248			173	221		404	404	221
Conf. Bikes (#/hr)			3				2			1		4
Turn Type		Perm									Perm	
Protected Phases		2						4			4	
Permitted Phases		2									4	
Actuated Green, G (s)		17.0						17.0		17.0	17.0	
Effective Green, g (s)		16.0						16.0		16.0	16.0	
Actuated g/C Ratio		0.27						0.27		0.27	0.27	
Clearance Time (s)		3.0						3.0		3.0	3.0	
Vehicle Extension (s)		5.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		759						777		161	845	
v/s Ratio Prot								0.14			c0.21	
v/s Ratio Perm		0.29								0.16		
v/c Ratio		1.09						0.51		0.61	0.78	
Uniform Delay, d1		22.0						18.7		19.3	20.4	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		58.8						2.4		16.3	7.0	
Delay (s)		80.8						21.0		35.6	27.4	
Level of Service		F						C		D	C	
Approach Delay (s)		80.8			0.0			21.0			28.5	
Approach LOS		F			A			C			C	

Intersection Summary			
HCM Average Control Delay	48.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖			↖↖↖		↖	↖		↖	↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91			0.91		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00			0.98		1.00	0.87		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			1.00		0.86	1.00		1.00	1.00	1.00
Frt	1.00	1.00			0.99		1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4521			4412		1361	1353		1583	1667	1102
Flt Permitted	0.08	1.00			1.00		0.58	1.00		0.95	1.00	1.00
Satd. Flow (perm)	142	4521			4412		826	1353		1583	1667	1102
Volume (vph)	100	2244	29	0	2195	156	111	97	82	168	294	146
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	102	2290	30	0	2240	159	113	99	84	171	300	149
RTOR Reduction (vph)	0	1	0	0	9	0	0	0	0	0	0	0
Lane Group Flow (vph)	102	2319	0	0	2390	0	113	183	0	171	300	149
Conf. Peds. (#/hr)	244		131	131		244	166		211	211		166
Conf. Bikes (#/hr)			3			5			2			3
Turn Type	Perm			Perm			Prot			custom		
Protected Phases	2			6			8			7		
Permitted Phases	2						8			4 4		
Actuated Green, G (s)	48.1	48.1			48.1		21.0	21.0		11.9	35.9	35.9
Effective Green, g (s)	47.1	47.1			47.1		20.0	20.0		10.9	34.9	34.9
Actuated g/C Ratio	0.52	0.52			0.52		0.22	0.22		0.12	0.39	0.39
Clearance Time (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Vehicle Extension (s)	5.0	5.0			5.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	2366			2309		184	301		192	646	427
v/s Ratio Prot		0.51			0.54			0.14		c0.11		
v/s Ratio Perm	c0.72						c0.14				0.18	0.14
v/c Ratio	1.38	0.98			1.04		0.61	0.61		0.89	0.46	0.35
Uniform Delay, d1	21.4	21.0			21.4		31.5	31.5		39.0	20.6	19.5
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	234.6	14.4			28.6		14.4	8.8		36.2	2.4	2.2
Delay (s)	256.0	35.3			50.0		45.9	40.3		75.2	23.0	21.7
Level of Service	F	D			D		D	D		E	C	C
Approach Delay (s)		44.6			50.0			42.4			37.1	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	46.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR2
Lane Configurations		↔	↔↔↔		↔	↔↔↔			↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0			4.0
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frbp, ped/bikes		1.00	0.98		1.00	0.96			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.98			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1583	4437		1583	4317			1442
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1583	4437		1583	4317			1442
Volume (vph)	220	573	2205	121	588	1434	110	69	283
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	227	591	2273	125	606	1478	113	71	292
RTOR Reduction (vph)	0	0	6	0	0	0	0	0	257
Lane Group Flow (vph)	0	818	2392	0	606	1662	0	0	35
Conf. Peds. (#/hr)	99	154		137	137		99	154	155
Conf. Bikes (#/hr)				6			7	10	2
Turn Type	Prot	Prot			Prot				custom
Protected Phases	1	1	2		8	6			1
Permitted Phases									
Actuated Green, G (s)		13.0	52.0		26.0	81.0			13.0
Effective Green, g (s)		12.0	51.0		25.0	80.0			12.0
Actuated g/C Ratio		0.12	0.51		0.25	0.80			0.12
Clearance Time (s)		3.0	3.0		3.0	3.0			3.0
Vehicle Extension (s)		2.5	5.0		3.0	5.0			2.5
Lane Grp Cap (vph)		190	2263		396	3454			173
v/s Ratio Prot		c0.52	c0.54		c0.38	0.38			0.02
v/s Ratio Perm									
v/c Ratio		4.31	1.06		1.53	0.48			0.20
Uniform Delay, d1		44.0	24.5		37.5	3.3			39.7
Progression Factor		1.18	1.53		1.00	1.00			1.00
Incremental Delay, d2		1488.5	26.9		251.1	0.5			0.4
Delay (s)		1540.3	64.5		288.6	3.7			40.1
Level of Service		F	E		F	A			D
Approach Delay (s)			439.8			79.8			
Approach LOS			F			E			
Intersection Summary									
HCM Average Control Delay			278.3			HCM Level of Service			F
HCM Volume to Capacity ratio			1.63						
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			12.0
Intersection Capacity Utilization			94.1%			ICU Level of Service			F
Analysis Period (min)			15						
c Critical Lane Group									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↖↗↘		↗	↖↗↘			↕	↗		↖↗↘	↗
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	0.86	0.86		1.00	0.91			0.95	1.00		0.86	0.86
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.98	0.85
Flt Protected	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	961	3001		1118	3209			2235	1000		2979	860
Flt Permitted	0.95	0.69		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	961	2097		1118	3209			2235	1000		2979	860
Volume (vph)	775	1579	24	216	1800	10	0	1141	580	0	1322	951
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	881	1794	27	245	2045	11	0	1297	659	0	1502	1081
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	212	0	17	325
Lane Group Flow (vph)	447	2254	0	245	2055	0	0	1297	447	0	1696	545
Turn Type	Prot		Prot				Perm				Over	
Protected Phases	7	4		3	8			2			6	7
Permitted Phases									2			
Actuated Green, G (s)	15.9	41.4		14.9	40.4			29.4	29.4		29.4	15.9
Effective Green, g (s)	17.0	42.0		16.0	41.0			30.0	30.0		30.0	17.0
Actuated g/C Ratio	0.17	0.42		0.16	0.41			0.30	0.30		0.30	0.17
Clearance Time (s)	5.1	4.6		5.1	4.6			4.6	4.6		4.6	5.1
Vehicle Extension (s)	3.0	3.0		5.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	163	1034		179	1316			671	300		894	146
v/s Ratio Prot	0.47	0.37		0.22	c0.64			c0.58			0.57	c0.63
v/s Ratio Perm		c0.54							0.45			
v/c Ratio	2.74	2.18		1.37	1.56			1.93	1.49		1.90	3.74
Uniform Delay, d1	41.5	29.0		42.0	29.5			35.0	35.0		35.0	41.5
Progression Factor	1.00	1.00		1.17	0.59			1.00	1.00		1.00	1.00
Incremental Delay, d2	801.1	534.1		180.6	254.5			425.3	237.3		408.0	1247.9
Delay (s)	842.6	563.1		229.8	271.8			460.3	272.3		443.0	1289.4
Level of Service	F	F		F	F			F	F		F	F
Approach Delay (s)		609.3			267.3			397.0			728.1	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	515.5	HCM Level of Service	F
HCM Volume to Capacity ratio	2.36		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	172.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↕↔		↔	↔↕↔		↔	↕↕	↔	↔	↕↔	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frt		1.00		1.00	1.00		1.00	1.00	0.85	1.00	0.94	
Flt Protected		0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3177		1118	3204		1118	2235	1000	1118	2093	
Flt Permitted		0.67		0.95	1.00		0.13	1.00	1.00	0.13	1.00	
Satd. Flow (perm)		2155		1118	3204		157	2235	1000	157	2093	
Volume (vph)	485	1876	10	360	1333	21	10	814	354	28	598	438
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	495	1914	10	367	1360	21	10	831	361	29	610	447
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	209	0	132	0
Lane Group Flow (vph)	0	2418	0	367	1379	0	10	831	152	29	925	0
Turn Type		Prot		Prot		Perm		Perm	Perm			
Protected Phases		7	4	3	8			2				6
Permitted Phases							2		2		6	
Actuated Green, G (s)		41.4		14.9	40.4		29.4	29.4	29.4	29.4	29.4	
Effective Green, g (s)		42.0		16.0	41.0		30.0	30.0	30.0	30.0	30.0	
Actuated g/C Ratio		0.42		0.16	0.41		0.30	0.30	0.30	0.30	0.30	
Clearance Time (s)		4.6		5.1	4.6		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)		3.0		5.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1079		179	1314		47	671	300	47	628	
v/s Ratio Prot		c0.38		c0.33	0.43			0.37			c0.44	
v/s Ratio Perm		c0.56					0.06		0.15	0.18		
v/c Ratio		2.24		2.05	1.05		0.21	1.24	0.51	0.62	1.47	
Uniform Delay, d1		29.0		42.0	29.5		26.2	35.0	28.9	30.1	35.0	
Progression Factor		0.80		0.93	1.44		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		558.9		490.2	38.1		10.1	119.8	6.0	48.2	221.7	
Delay (s)		582.0		529.4	80.7		36.2	154.8	34.9	78.3	256.7	
Level of Service		F		F	F		D	F	C	E	F	
Approach Delay (s)		582.0		174.9			117.8			251.9		
Approach LOS		F		F			F			F		

Intersection Summary

HCM Average Control Delay	329.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.92		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	173.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.86	0.97	0.88
Frbp, ped/bikes		1.00	0.94	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)		4047	940	2168	4047	2168	1760
Flt Permitted		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)		4047	940	2168	4047	2168	1760
Volume (vph)	0	2257	263	481	1689	394	1169
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	2327	271	496	1741	406	1205
RTOR Reduction (vph)	0	0	72	0	0	0	680
Lane Group Flow (vph)	0	2327	199	496	1741	406	525
Conf. Peds. (#/hr)			60	60		1	4
Conf. Bikes (#/hr)			23				4
Turn Type	Prot		pm+ov	Prot			Over
Protected Phases	1	6	4	3	2 3	4	3
Permitted Phases			6				
Actuated Green, G (s)		47.4	73.1	31.0	84.4	25.7	31.0
Effective Green, g (s)		49.4	78.0	30.0	83.4	28.6	30.0
Actuated g/C Ratio		0.41	0.65	0.25	0.70	0.24	0.25
Clearance Time (s)		6.0	6.9	3.0		6.9	3.0
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1666	642	542	2813	517	440
v/s Ratio Prot		c0.57	0.07	0.23	0.43	c0.19	c0.30
v/s Ratio Perm			0.14				
v/c Ratio		1.40	0.31	0.92	0.62	0.79	1.19
Uniform Delay, d1		35.3	9.2	43.8	9.8	42.8	45.0
Progression Factor		0.90	3.48	1.00	1.00	1.00	1.00
Incremental Delay, d2		179.8	0.1	20.1	0.4	7.7	107.2
Delay (s)		211.6	32.1	63.8	10.2	50.5	152.2
Level of Service		F	C	E	B	D	F
Approach Delay (s)		192.9			22.1	126.5	
Approach LOS		F			C	F	
Intersection Summary							
HCM Average Control Delay			117.0		HCM Level of Service		F
HCM Volume to Capacity ratio			1.18				
Actuated Cycle Length (s)			120.0		Sum of lost time (s)		12.0
Intersection Capacity Utilization			123.6%		ICU Level of Service		H
Analysis Period (min)			15				
c Critical Lane Group							



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘		↙		↖	↑↑↑		↖	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0				4.0	4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	0.88				1.00	0.91			0.95	1.00
Frt	1.00	1.00	0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1504	1504	2493				1583	4550			3167	1417
Flt Permitted	0.95	0.95	1.00				0.10	1.00			1.00	1.00
Satd. Flow (perm)	1504	1504	2493				162	4550			3167	1417
Volume (vph)	605	0	631	0	0	0	159	531	0	0	1093	200
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	688	0	717	0	0	0	181	603	0	0	1242	227
RTOR Reduction (vph)	0	0	595	0	0	0	0	0	0	0	0	163
Lane Group Flow (vph)	344	344	122	0	0	0	181	603	0	0	1242	64
Turn Type	Split		custom				pm+pt			Perm		Over
Protected Phases	4	4	7	1		3	5	2			6	4
Permitted Phases							2			6		
Actuated Green, G (s)	16.5	16.5	14.7				45.4	40.4			40.4	16.5
Effective Green, g (s)	17.1	17.1	15.3				46.6	41.6			41.6	17.1
Actuated g/C Ratio	0.19	0.19	0.17				0.52	0.46			0.46	0.19
Clearance Time (s)	4.6	4.6					4.0	5.2			5.2	4.6
Vehicle Extension (s)	3.0	3.0					3.0	3.2			3.4	3.0
Lane Grp Cap (vph)	286	286	424				163	2103			1464	269
v/s Ratio Prot	c0.23	0.23	c0.05				c0.06	0.13			0.39	0.05
v/s Ratio Perm							c0.51					
v/c Ratio	1.20	1.20	0.29				1.11	0.29			0.85	0.24
Uniform Delay, d1	36.5	36.5	32.6				17.2	15.0			21.4	30.9
Progression Factor	1.01	1.01	5.18				2.30	1.13			1.00	1.00
Incremental Delay, d2	117.8	117.8	0.3				87.1	0.2			6.3	2.1
Delay (s)	154.5	154.5	169.2				126.7	17.2			27.7	33.0
Level of Service	F	F	F				F	B			C	C
Approach Delay (s)		162.0			0.0			42.5			28.5	
Approach LOS		F			A			D			C	

Intersection Summary

HCM Average Control Delay	82.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑		↑↑	↑↑↑		↑↑	↑↑	↑↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.86		0.97	0.91		0.97	0.95	0.88
Frt		1.00	0.85		0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		4550	1417		5645		3072	4498		3072	3167	2493
Flt Permitted		1.00	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		4550	1417		5645		3072	4498		3072	3167	2493
Volume (vph)	0	2899	505	0	2537	292	5	862	72	358	504	239
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	2989	521	0	2615	301	5	889	74	369	520	246
RTOR Reduction (vph)	0	0	61	0	22	0	0	1	0	0	0	163
Lane Group Flow (vph)	0	2989	460	0	2894	0	5	962	0	369	520	83
Turn Type		pm+ov					Prot			Prot		Perm
Protected Phases		6	3		2		3	8		7	4	
Permitted Phases		6										4
Actuated Green, G (s)		38.5	46.1		38.5		7.6	27.7		9.0	29.1	29.1
Effective Green, g (s)		40.0	47.6		40.0		7.6	29.0		9.0	30.4	30.4
Actuated g/C Ratio		0.44	0.53		0.44		0.08	0.32		0.10	0.34	0.34
Clearance Time (s)		5.5	4.0		5.5		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)		4.9	3.0		5.2		3.0	5.1		3.0	5.1	5.1
Lane Grp Cap (vph)		2022	812		2509		259	1449		307	1070	842
v/s Ratio Prot		c0.66	0.05		0.51		0.00	c0.21		c0.12	0.16	
v/s Ratio Perm			0.28									0.03
v/c Ratio		1.48	0.57		1.15		0.02	0.66		1.20	0.49	0.10
Uniform Delay, d1		25.0	14.3		25.0		37.8	26.3		40.5	23.6	20.4
Progression Factor		1.00	1.00		0.94		1.00	1.00		1.27	1.01	2.71
Incremental Delay, d2		217.9	0.9		69.5		0.0	2.4		107.9	0.4	0.1
Delay (s)		242.9	15.2		93.0		37.8	28.7		159.1	24.3	55.4
Level of Service		F	B		F		D	C		F	C	E
Approach Delay (s)		209.1			93.0		28.8			74.9		
Approach LOS		F			F		C			E		

Intersection Summary

HCM Average Control Delay	131.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.86	1.00	0.97	0.91	0.94	0.88
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1118	4047	1000	2168	3212	3152	1760
Flt Permitted	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1118	4047	1000	2168	3212	3152	1760
Volume (vph)	16	1823	507	302	1764	783	689
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	16	1841	512	305	1782	791	696
RTOR Reduction (vph)	0	0	316	0	0	0	548
Lane Group Flow (vph)	16	1841	196	305	1782	791	148
Conf. Peds. (#/hr)			86	86		1	230
Conf. Bikes (#/hr)			19				3
Turn Type	Prot		Over	Prot		Over	
Protected Phases	1	6	8	5	2	8	5
Permitted Phases							
Actuated Green, G (s)	2.2	46.7	30.1	25.6	69.1	30.1	25.6
Effective Green, g (s)	3.2	49.4	33.0	25.6	71.8	33.0	25.6
Actuated g/C Ratio	0.03	0.41	0.28	0.21	0.60	0.28	0.21
Clearance Time (s)	5.0	6.7	6.9	4.0	6.7	6.9	4.0
Vehicle Extension (s)	3.0	5.0	3.0	3.0	5.0	3.0	3.0
Lane Grp Cap (vph)	30	1666	275	463	1922	867	375
v/s Ratio Prot	0.01	c0.45	0.20	0.14	c0.55	c0.25	0.08
v/s Ratio Perm							
v/c Ratio	0.53	1.11	0.71	0.66	0.93	0.91	0.40
Uniform Delay, d1	57.7	35.3	39.2	43.2	21.7	42.1	40.6
Progression Factor	0.88	1.52	2.51	0.87	0.70	1.00	1.00
Incremental Delay, d2	1.6	48.3	0.8	2.6	7.3	13.7	0.7
Delay (s)	52.3	101.8	99.3	40.2	22.5	55.8	41.2
Level of Service	D	F	F	D	C	E	D
Approach Delay (s)		100.9			25.1	49.0	
Approach LOS		F			C	D	
Intersection Summary							
HCM Average Control Delay			61.3		HCM Level of Service		E
HCM Volume to Capacity ratio			0.99				
Actuated Cycle Length (s)			120.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization			94.7%		ICU Level of Service		F
Analysis Period (min)			15				
c Critical Lane Group							



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↘↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	0.97	0.91	0.91
Frbp, ped/bikes	1.00	1.00	0.89	1.00	1.00	0.86	1.00	1.00	0.87	1.00	0.92	0.92
Flpb, ped/bikes	0.99	1.00	1.00	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	0.95
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1569	3167	1260	1525	3167	1213	3072	4550	1231	3072	3943	3943
Flt Permitted	0.27	1.00	1.00	0.33	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	439	3167	1260	530	3167	1213	3072	4550	1231	3072	3943	3943
Volume (vph)	45	715	511	282	627	400	265	616	154	220	818	452
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	777	555	307	682	435	288	670	167	239	889	491
RTOR Reduction (vph)	0	0	1	0	0	174	0	0	53	0	107	0
Lane Group Flow (vph)	49	777	554	307	682	261	288	670	114	239	1273	0
Confl. Peds. (#/hr)	137		119	119		137	178		101	101		178
Confl. Bikes (#/hr)			4			5			4			3
Turn Type	pm+pt		pm+ov	Perm		Perm	Prot		Perm	Prot		
Protected Phases	1	6	3		2		3	8		7	4	
Permitted Phases	6		6	2		2			8			
Actuated Green, G (s)	42.3	42.3	48.3	35.5	35.5	35.5	6.0	20.9	20.9	12.8	27.7	
Effective Green, g (s)	43.8	43.8	49.8	37.0	37.0	37.0	6.0	21.4	21.4	12.8	28.2	
Actuated g/C Ratio	0.49	0.49	0.55	0.41	0.41	0.41	0.07	0.24	0.24	0.14	0.31	
Clearance Time (s)	3.5	5.5	4.0	5.5	5.5	5.5	4.0	4.5	4.5	4.0	4.5	
Vehicle Extension (s)	3.0	4.0	2.0	4.0	4.0	4.0	2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	249	1541	753	218	1302	499	205	1082	293	437	1235	
v/s Ratio Prot	0.01	0.25	c0.05		0.22		c0.09	0.15		0.08	c0.32	
v/s Ratio Perm	0.09		0.39	c0.58		0.22			0.09			
v/c Ratio	0.20	0.50	0.74	1.41	0.52	0.52	1.40	0.62	0.39	0.55	1.07dr	
Uniform Delay, d1	13.3	15.7	15.1	26.5	19.9	19.9	42.0	30.7	28.8	35.9	30.9	
Progression Factor	0.96	0.95	0.94	1.07	1.08	1.25	1.03	1.16	1.20	1.00	1.00	
Incremental Delay, d2	0.4	0.4	3.2	208.6	0.5	1.3	208.5	2.6	3.8	0.8	33.8	
Delay (s)	13.1	15.3	17.4	237.0	22.0	26.2	251.9	38.3	38.4	36.7	64.7	
Level of Service	B	B	B	F	C	C	F	D	D	D	E	
Approach Delay (s)		16.1			69.7			93.0			60.6	
Approach LOS		B			E			F			E	

Intersection Summary

HCM Average Control Delay	58.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↘	↑↑↑	↗	↘	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)					4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor					1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frt					1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected					0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)					1583	1417	1583	4550	1417	1583	4550	
Flt Permitted					0.76	1.00	0.09	1.00	1.00	0.36	1.00	
Satd. Flow (perm)					1262	1417	153	4550	1417	593	4550	
Volume (vph)	0	0	0	125	0	149	1	684	95	124	1710	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	136	0	162	1	743	103	135	1859	0
RTOR Reduction (vph)	0	0	0	0	0	132	0	0	28	0	0	0
Lane Group Flow (vph)	0	0	0	0	136	30	1	743	75	135	1859	0
Turn Type	Perm			Perm			Perm	Perm	Perm		Perm	
Protected Phases	4			4			4		2		2	
Permitted Phases	4			4			2		2		2	
Actuated Green, G (s)				15.5			15.5	64.5	64.5	64.5	64.5	64.5
Effective Green, g (s)				16.5			16.5	65.5	65.5	65.5	65.5	65.5
Actuated g/C Ratio				0.18			0.18	0.73	0.73	0.73	0.73	0.73
Clearance Time (s)				5.0			5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)				3.0			3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)				231			260	111	3311	1031	432	3311
v/s Ratio Prot							0.16				c0.41	
v/s Ratio Perm				c0.11			0.02	0.01	0.05		0.23	
v/c Ratio				0.59			0.11	0.01	0.22	0.07	0.31	0.56
Uniform Delay, d1				33.6			30.7	3.4	4.0	3.5	4.3	5.6
Progression Factor				1.00			1.00	2.07	1.60	3.74	1.11	1.20
Incremental Delay, d2				3.8			0.2	0.1	0.2	0.1	0.9	0.3
Delay (s)				37.4			30.9	7.1	6.5	13.3	5.7	7.1
Level of Service				D			C	A	A	B	A	A
Approach Delay (s)	0.0			33.9			7.3				7.0	
Approach LOS	A			C			A				A	

Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕	↗	↖	↕↕↕		↖↖	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95	0.95	1.00	0.91		0.97	0.91	
Frt		0.96			0.96	0.85	1.00	0.96		1.00	1.00	
Flt Protected		0.97			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2961			1501	1346	1583	4385		3072	4541	
Flt Permitted		0.80			0.90	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2424			1366	1346	1583	4385		3072	4541	
Volume (vph)	84	31	42	10	16	69	11	638	204	132	1658	22
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	86	32	43	10	16	70	11	651	208	135	1692	22
RTOR Reduction (vph)	0	36	0	0	8	31	0	33	0	0	1	0
Lane Group Flow (vph)	0	125	0	0	27	30	11	826	0	135	1713	0
Turn Type		Perm		Perm		pm+ov	Prot			Prot		
Protected Phases		8		4	4	5	1	6		5	2	
Permitted Phases		8		4		4						
Actuated Green, G (s)		12.6			12.6	20.7	1.4	55.1		8.1	61.8	
Effective Green, g (s)		14.1			14.1	22.2	1.4	55.8		8.1	62.5	
Actuated g/C Ratio		0.16			0.16	0.25	0.02	0.62		0.09	0.69	
Clearance Time (s)		5.5			5.5	4.0	4.0	4.7		4.0	4.7	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		380			214	392	25	2719		276	3153	
v/s Ratio Prot						0.01	0.01	0.19		c0.04	c0.38	
v/s Ratio Perm		c0.05			0.02	0.02						
v/c Ratio		0.33			0.13	0.08	0.44	0.30		0.49	0.54	
Uniform Delay, d1		33.7			32.7	26.0	43.9	8.0		39.0	6.7	
Progression Factor		1.00			1.00	1.00	0.70	2.06		0.99	0.92	
Incremental Delay, d2		0.5			0.3	0.1	11.4	0.3		1.1	0.6	
Delay (s)		34.2			32.9	26.1	42.0	16.7		39.7	6.8	
Level of Service		C			C	C	D	B		D	A	
Approach Delay (s)		34.2			28.6			17.1			9.2	
Approach LOS		C			C			B			A	

Intersection Summary

HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



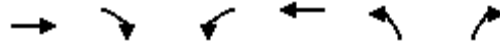
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔		↔	↔		↔	↔↔	↔↔↔		↔	↔↔↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97		1.00	1.00		1.00	0.97	0.91		1.00	0.91	
Frt	1.00		0.85	1.00		0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95		1.00	0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3072		1417	1583		1417	3072	4520		1583	4544	
Flt Permitted	0.95		1.00	0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3072		1417	1583		1417	3072	4520		1583	4544	
Volume (vph)	128	0	179	25	0	76	19	679	31	82	1532	15
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	141	0	197	27	0	84	21	746	34	90	1684	16
RTOR Reduction (vph)	0	0	154	0	0	63	0	4	0	0	1	0
Lane Group Flow (vph)	141	0	43	27	0	21	21	776	0	90	1699	0
Turn Type	Prot		custom	Prot		custom	Prot			Prot		
Protected Phases	3		3 5	4		1 4	5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	13.2		19.4	9.9		22.9	6.2	40.9		8.1	42.8	
Effective Green, g (s)	14.1		19.5	10.8		22.1	5.4	41.8		7.3	43.7	
Actuated g/C Ratio	0.16		0.22	0.12		0.25	0.06	0.46		0.08	0.49	
Clearance Time (s)	4.9			4.9			3.2	4.9		3.2	4.9	
Vehicle Extension (s)	3.0			3.0			3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	481		307	190		348	184	2099		128	2206	
v/s Ratio Prot	c0.05		0.03	c0.02		0.01	0.01	0.17		c0.06	c0.37	
v/s Ratio Perm												
v/c Ratio	0.29		0.14	0.14		0.06	0.11	0.37		0.70	0.77	
Uniform Delay, d1	33.5		28.5	35.5		26.0	40.0	15.6		40.3	19.0	
Progression Factor	1.00		1.00	1.00		1.00	1.39	0.39		0.84	1.17	
Incremental Delay, d2	0.3		0.2	0.3		0.1	0.0	0.0		14.3	2.4	
Delay (s)	33.9		28.7	35.8		26.1	55.8	6.2		48.1	24.6	
Level of Service	C		C	D		C	E	A		D	C	
Approach Delay (s)		30.9			28.4			7.5			25.8	
Approach LOS		C			C			A			C	
Intersection Summary												
HCM Average Control Delay			21.6									HCM Level of Service C
HCM Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			90.0									Sum of lost time (s) 12.0
Intersection Capacity Utilization			59.2%									ICU Level of Service B
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↗	↑↑↑	↑↑↑↗		↖↗	↘↙
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.91	0.91		0.97	0.88
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3072	4550	4479		3072	2493
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3072	4550	4479		3072	2493
Volume (vph)	509	1834	1762	204	571	1119
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	553	1993	1915	222	621	1216
RTOR Reduction (vph)	0	0	16	0	0	365
Lane Group Flow (vph)	553	1993	2121	0	621	851
Turn Type	Prot					Prot
Protected Phases	5	2 5	6		4	4
Permitted Phases						
Actuated Green, G (s)	13.0	51.5	33.5		28.0	28.0
Effective Green, g (s)	14.0	53.0	35.0		29.0	29.0
Actuated g/C Ratio	0.16	0.59	0.39		0.32	0.32
Clearance Time (s)	5.0		5.5		5.0	5.0
Vehicle Extension (s)	2.0		3.0		3.0	3.0
Lane Grp Cap (vph)	478	2679	1742		990	803
v/s Ratio Prot	c0.18	0.44	c0.47		0.20	c0.34
v/s Ratio Perm						
v/c Ratio	1.16	0.74	1.22		0.63	1.06
Uniform Delay, d1	38.0	13.5	27.5		25.9	30.5
Progression Factor	1.00	1.00	1.00		1.25	1.51
Incremental Delay, d2	91.9	1.9	103.4		0.9	43.9
Delay (s)	129.9	15.5	130.9		33.3	89.8
Level of Service	F	B	F		C	F
Approach Delay (s)		40.3	130.9		70.7	
Approach LOS		D	F		E	

Intersection Summary

HCM Average Control Delay	78.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↓	↑↑↑	↑↓	↑
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	0.97	0.91
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3212	1000	2168	3212	2168	910
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3212	1000	2168	3212	2168	910
Volume (vph)	2270	334	128	2445	742	275
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	2340	344	132	2521	765	284
RTOR Reduction (vph)	0	133	0	0	0	205
Lane Group Flow (vph)	2340	211	132	2521	765	79
Confl. Peds. (#/hr)		145	145		56	
Confl. Bikes (#/hr)		19				
Turn Type		Over	Prot			Perm
Protected Phases	6	4	5	2	4	
Permitted Phases						4
Actuated Green, G (s)	66.6	28.1	10.2	80.8	28.1	28.1
Effective Green, g (s)	67.8	30.0	10.2	82.0	30.0	30.0
Actuated g/C Ratio	0.56	0.25	0.08	0.68	0.25	0.25
Clearance Time (s)	5.2	5.9	4.0	5.2	5.9	5.9
Vehicle Extension (s)	3.7	3.8	1.0	3.5	3.8	3.8
Lane Grp Cap (vph)	1815	250	184	2195	542	228
v/s Ratio Prot	c0.73	0.21	0.06	c0.78	c0.35	
v/s Ratio Perm						0.09
v/c Ratio	1.29	0.84	0.72	1.15	1.41	0.35
Uniform Delay, d1	26.1	42.8	53.5	19.0	45.0	37.0
Progression Factor	1.60	0.94	0.97	0.85	1.00	1.00
Incremental Delay, d2	130.6	3.4	5.1	69.7	195.9	4.1
Delay (s)	172.3	43.6	56.8	85.9	240.9	41.1
Level of Service	F	D	E	F	F	D
Approach Delay (s)	155.8			84.4	186.8	
Approach LOS	F			F	F	

Intersection Summary			
HCM Average Control Delay	131.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	123.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.88	0.95	1.00	1.00	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3072	2493	3167	1417	1583	4550
Flt Permitted	0.95	1.00	1.00	1.00	0.42	1.00
Satd. Flow (perm)	3072	2493	3167	1417	699	4550
Volume (vph)	617	441	369	322	224	322
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	678	485	405	354	246	354
RTOR Reduction (vph)	0	279	0	23	0	0
Lane Group Flow (vph)	678	206	405	331	246	354
Turn Type		Perm		pm+ov	pm+pt	
Protected Phases	4		2	4	1	6
Permitted Phases		4		2	6	
Actuated Green, G (s)	37.8	37.8	34.2	72.0	42.2	42.2
Effective Green, g (s)	38.3	38.3	35.7	74.0	43.7	43.7
Actuated g/C Ratio	0.43	0.43	0.40	0.82	0.49	0.49
Clearance Time (s)	4.5	4.5	5.5	4.5	3.0	5.5
Vehicle Extension (s)	3.0	3.0	5.0	3.0	3.0	5.0
Lane Grp Cap (vph)	1307	1061	1256	1228	379	2209
v/s Ratio Prot	c0.22		0.13	0.11	c0.03	0.08
v/s Ratio Perm		0.08		0.12	c0.29	
v/c Ratio	0.52	0.19	0.32	0.27	0.65	0.16
Uniform Delay, d1	19.1	16.2	18.8	1.8	18.0	12.9
Progression Factor	0.98	3.41	1.31	0.82	1.00	1.00
Incremental Delay, d2	0.2	0.0	0.7	0.1	3.8	0.2
Delay (s)	18.8	55.2	25.2	1.6	21.8	13.1
Level of Service	B	E	C	A	C	B
Approach Delay (s)	34.0		14.2			16.7
Approach LOS	C		B			B

Intersection Summary

HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↗	↑↑↑	↑↑↑	↖	↖↗	↖↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.91	1.00	0.97	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3072	4550	4550	1417	3072	2493
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3072	4550	4550	1417	3072	2493
Volume (vph)	166	2237	2405	73	4	848
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	169	2283	2454	74	4	865
RTOR Reduction (vph)	0	0	0	33	0	0
Lane Group Flow (vph)	169	2283	2454	41	4	865
Turn Type	Prot			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)	10.1	53.8	39.7	39.7	26.3	26.3
Effective Green, g (s)	10.1	55.0	40.9	40.9	27.0	27.0
Actuated g/C Ratio	0.11	0.61	0.45	0.45	0.30	0.30
Clearance Time (s)	4.0	5.2	5.2	5.2	4.7	4.7
Vehicle Extension (s)	3.0	4.8	4.6	4.6	3.0	3.0
Lane Grp Cap (vph)	345	2781	2068	644	922	748
v/s Ratio Prot	0.06	c0.50	c0.54		0.00	
v/s Ratio Perm				0.03		c0.35
v/c Ratio	0.49	0.82	1.19	0.06	0.00	1.16
Uniform Delay, d1	37.5	13.7	24.6	13.8	22.1	31.5
Progression Factor	0.54	2.20	1.00	1.00	0.99	0.82
Incremental Delay, d2	0.1	0.3	89.2	0.2	0.0	84.3
Delay (s)	20.3	30.3	113.8	14.0	21.8	110.2
Level of Service	C	C	F	B	C	F
Approach Delay (s)		29.6	110.8		109.8	
Approach LOS		C	F		F	

Intersection Summary

HCM Average Control Delay	76.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶	↶	↶	↶↶↶		↶	↶↶		↶	↶↶	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4550	1417	1583	4524		1583	3151		1583	3126	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.13	1.00		0.15	1.00	
Satd. Flow (perm)	1583	4550	1417	1583	4524		215	3151		247	3126	
Volume (vph)	134	2589	332	99	2312	93	178	1128	39	127	942	88
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	138	2669	342	102	2384	96	184	1163	40	131	971	91
RTOR Reduction (vph)	0	0	110	0	3	0	0	2	0	0	6	0
Lane Group Flow (vph)	138	2669	232	102	2477	0	184	1201	0	131	1056	0
Turn Type	Prot		Perm	Prot		pm+pt				Perm		
Protected Phases	1	6		5	2		3	8				4
Permitted Phases			6				8			4		
Actuated Green, G (s)	13.3	54.5	54.5	11.5	52.7		40.0	40.0		26.0	26.0	
Effective Green, g (s)	13.3	55.5	55.5	11.5	53.7		41.0	41.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.46	0.46	0.10	0.45		0.34	0.34		0.22	0.22	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		3.5	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	175	2104	655	152	2024		187	1077		56	703	
v/s Ratio Prot	c0.09	c0.59		0.06	0.55		0.08	c0.38			0.34	
v/s Ratio Perm			0.16				0.25			c0.53		
v/c Ratio	0.79	1.27	0.35	0.67	1.22		0.98	1.12		2.34	1.50	
Uniform Delay, d1	52.0	32.2	20.7	52.4	33.1		57.0	39.5		46.5	46.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.71	1.56		1.00	1.00	
Incremental Delay, d2	19.2	124.8	1.5	8.8	105.3		16.0	53.2		654.4	233.3	
Delay (s)	71.1	157.0	22.2	61.2	138.4		113.5	115.0		700.9	279.8	
Level of Service	E	F	C	E	F		F	F		F	F	
Approach Delay (s)		138.6			135.4			114.8			326.0	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	160.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	119.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑	↖	↖↗	↑↑	↖
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3212	1000	2168	3212	1000	2168	2235	1000	2168	2235	1000
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2168	3212	1000	2168	3212	1000	2168	2235	1000	2168	2235	1000
Volume (vph)	98	2092	120	116	2700	386	5	1124	78	395	1284	85
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	101	2157	124	120	2784	398	5	1159	80	407	1324	88
RTOR Reduction (vph)	0	0	54	0	0	13	0	0	43	0	0	34
Lane Group Flow (vph)	101	2157	70	120	2784	385	5	1159	37	407	1324	54
Turn Type	Prot		Perm	Prot	pm+ov		Prot	Perm		Prot	Perm	
Protected Phases	1	6		5	2	7	3	8		7	4	
Permitted Phases			6			2			8			4
Actuated Green, G (s)	7.0	27.3	27.3	11.0	31.3	56.5	1.1	36.6	36.6	25.2	60.7	60.7
Effective Green, g (s)	7.0	28.8	28.8	11.0	32.8	58.0	1.1	39.0	39.0	25.2	63.1	63.1
Actuated g/C Ratio	0.06	0.24	0.24	0.09	0.27	0.48	0.01	0.32	0.32	0.21	0.53	0.53
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5	4.0	4.0	6.4	6.4	4.0	6.4	6.4
Vehicle Extension (s)	2.0	4.5	4.5	2.0	5.2	2.0	2.0	4.7	4.7	2.0	4.7	4.7
Lane Grp Cap (vph)	126	771	240	199	878	483	20	726	325	455	1175	526
v/s Ratio Prot	0.05	c0.67		0.06	c0.87	0.17	0.00	c0.52		0.19	c0.59	
v/s Ratio Perm			0.07			0.22			0.04			0.05
v/c Ratio	0.80	2.80	0.29	0.60	3.17	0.80	0.25	1.60	0.11	0.89	1.13	0.10
Uniform Delay, d1	55.8	45.6	37.3	52.4	43.6	26.0	59.0	40.5	28.4	46.1	28.4	14.3
Progression Factor	1.06	0.41	0.12	0.94	0.92	0.87	1.00	1.00	1.00	0.62	0.68	0.21
Incremental Delay, d2	3.2	809.3	0.3	0.3	977.1	0.8	2.4	274.9	0.3	8.6	61.8	0.1
Delay (s)	62.1	828.1	4.7	49.8	1017.5	23.4	61.4	315.4	28.7	37.3	81.3	3.0
Level of Service	E	F	A	D	F	C	E	F	C	D	F	A
Approach Delay (s)		752.7			862.5			295.9			67.7	
Approach LOS		F			F			F			E	

Intersection Summary

HCM Average Control Delay	586.7	HCM Level of Service	F
HCM Volume to Capacity ratio	2.05		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	159.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.86		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	5713		1583	3167	1417	1583	3167	1417
Flt Permitted	0.11	1.00	1.00	0.11	1.00		0.15	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	178	4550	1417	183	5713		252	3167	1417	219	3167	1417
Volume (vph)	385	2250	191	179	3161	76	96	804	55	221	1074	276
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	397	2320	197	185	3259	78	99	829	57	228	1107	285
RTOR Reduction (vph)	0	0	20	0	4	0	0	0	5	0	0	0
Lane Group Flow (vph)	397	2320	177	185	3333	0	99	829	52	228	1107	285
Turn Type	pm+pt		Perm	pm+pt		Perm		pm+ov	pm+pt		pm+ov	
Protected Phases	1	6		5	2			8	5	7	4	1
Permitted Phases	6		6	2		8	8	8	4			4
Actuated Green, G (s)	43.0	37.0	37.0	41.0	36.0	25.0	25.0	30.0	34.0	34.0	40.0	
Effective Green, g (s)	43.5	37.5	37.5	41.5	36.5	26.5	26.5	31.5	35.5	35.5	41.5	
Actuated g/C Ratio	0.48	0.42	0.42	0.46	0.41	0.29	0.29	0.35	0.39	0.39	0.46	
Clearance Time (s)	4.0	4.5	4.5	4.0	4.5	5.5	5.5	4.0	4.0	5.5	4.0	
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	5.0	3.0	3.0	5.0	3.0	
Lane Grp Cap (vph)	180	1896	590	162	2317	74	933	559	162	1249	716	
v/s Ratio Prot	c0.15	0.51		0.06	0.58		0.26	0.01	c0.08	0.35	0.03	
v/s Ratio Perm	c0.92		0.12	0.46		0.39		0.03	c0.48		0.17	
v/c Ratio	2.21	1.22	0.30	1.14	1.44	1.34	0.89	0.09	1.41	0.89	0.40	
Uniform Delay, d1	44.2	26.2	17.5	44.7	26.8	31.8	30.3	19.7	24.8	25.4	16.0	
Progression Factor	2.40	0.66	0.70	1.95	1.48	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	544.1	101.1	0.1	71.1	197.6	218.9	11.0	0.1	215.9	8.4	0.4	
Delay (s)	650.4	118.5	12.4	158.4	237.1	250.7	41.4	19.7	240.7	33.8	16.4	
Level of Service	F	F	B	F	F	F	D	B	F	C	B	
Approach Delay (s)		183.8			233.0		61.2				59.9	
Approach LOS		F			F		E				E	

Intersection Summary

HCM Average Control Delay	167.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	131.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1583	3070		1583	3156		1504	1583	1417		1617	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1583	3070		1583	3156		1504	1583	1417		1617	
Volume (vph)	10	1157	297	178	950	21	340	618	780	27	283	75
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	1205	309	185	990	22	354	644	812	28	295	78
RTOR Reduction (vph)	0	19	0	0	1	0	0	0	235	0	0	0
Lane Group Flow (vph)	10	1495	0	185	1011	0	354	644	577	0	401	0
Turn Type	Prot		Prot		Split		pm+ov		Split			
Protected Phases	1	6		5	2		3	3	5		4	4
Permitted Phases									3			
Actuated Green, G (s)	1.5	54.9		17.4	70.8		10.0	10.0	27.4		20.0	
Effective Green, g (s)	0.5	55.7		16.4	71.6		10.9	10.9	27.3		21.0	
Actuated g/C Ratio	0.00	0.46		0.14	0.60		0.09	0.09	0.23		0.18	
Clearance Time (s)	3.0	4.8		3.0	4.8		4.9	4.9	3.0		5.0	
Vehicle Extension (s)	3.0	6.0		3.0	6.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	7	1425		216	1883		137	144	370		283	
v/s Ratio Prot	0.01	c0.49		0.12	0.32		0.24	c0.41	c0.21		c0.25	
v/s Ratio Perm									0.19			
v/c Ratio	1.43	1.05		0.86	0.54		2.58	4.47	1.56		1.42	
Uniform Delay, d1	59.8	32.1		50.6	14.4		54.5	54.5	46.4		49.5	
Progression Factor	1.11	1.10		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	251.9	24.4		26.7	1.1		733.6	1578.4	264.8		207.2	
Delay (s)	318.2	59.9		77.4	15.5		788.1	1633.0	311.2		256.7	
Level of Service	F	E		E	B		F	F	F		F	
Approach Delay (s)		61.6			25.0			874.8			256.7	
Approach LOS		E			C			F			F	

Intersection Summary

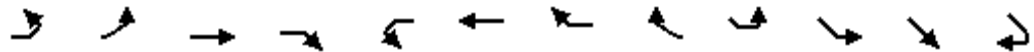
HCM Average Control Delay	367.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	133.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.89		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1504	1510	1417	1583	1486		1583	1653		1583	1667	1417
Flt Permitted	0.71	0.68	1.00	0.95	1.00		0.35	1.00		0.23	1.00	1.00
Satd. Flow (perm)	1120	1074	1417	1583	1486		582	1653		375	1667	1417
Volume (vph)	537	10	172	20	20	53	64	693	39	30	550	342
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	559	10	179	21	21	55	67	722	41	31	573	356
RTOR Reduction (vph)	0	0	153	0	50	0	0	2	0	0	0	142
Lane Group Flow (vph)	280	289	26	21	26	0	67	761	0	31	573	214
Turn Type	Perm		Perm	Split			Perm			Perm		Perm
Protected Phases		4		3	3			2			2	
Permitted Phases	4		4				2			2		2
Actuated Green, G (s)	10.0	10.0	10.0	6.0	6.0		43.6	43.6		43.6	43.6	43.6
Effective Green, g (s)	11.0	11.0	11.0	7.0	7.0		45.0	45.0		45.0	45.0	45.0
Actuated g/C Ratio	0.15	0.15	0.15	0.09	0.09		0.60	0.60		0.60	0.60	0.60
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.4	5.4		5.4	5.4	5.4
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	164	158	208	148	139		349	992		225	1000	850
v/s Ratio Prot				0.01	c0.02			c0.46			0.34	
v/s Ratio Perm	0.25	c0.27	0.02				0.12			0.08		0.15
v/c Ratio	1.71	1.83	0.13	0.14	0.19		0.19	0.77		0.14	0.57	0.25
Uniform Delay, d1	32.0	32.0	27.8	31.2	31.4		6.8	11.1		6.5	9.1	7.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	342.9	396.7	0.3	0.4	0.7		1.2	5.7		1.3	2.4	0.7
Delay (s)	374.9	428.7	28.1	31.7	32.0		8.0	16.8		7.8	11.5	7.8
Level of Service	F	F	C	C	C		A	B		A	B	A
Approach Delay (s)		312.7			32.0			16.1			10.0	
Approach LOS		F			C			B			B	

Intersection Summary

HCM Average Control Delay	98.7	HCM Level of Service	F
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	SEL2	SEL	SET	SER
Lane Configurations			↕	↗		↕↗				↘	↕↗	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)			4.0	4.0		4.0				4.0	4.0	
Lane Util. Factor			1.00	1.00		0.95				1.00	0.95	
Frt			1.00	0.85		0.98				1.00	0.99	
Flt Protected			0.99	1.00		0.98				0.95	1.00	
Satd. Flow (prot)			1159	1000		2162				1118	2209	
Flt Permitted			0.35	1.00		0.55				0.51	1.00	
Satd. Flow (perm)			412	1000		1201				605	2209	
Volume (vph)	11	234	561	48	320	535	53	55	11	5	560	48
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	11	244	584	50	333	557	55	57	11	5	583	50
RTOR Reduction (vph)	0	0	0	26	0	6	0	0	0	0	8	0
Lane Group Flow (vph)	0	0	839	24	0	996	0	0	0	16	625	0
Turn Type		Perm		Perm	Perm				Perm	Perm		
Protected Phases			6			2					4	
Permitted Phases		6		6	2				4	4		
Actuated Green, G (s)			34.0	34.0		34.0				30.0	30.0	
Effective Green, g (s)			36.0	36.0		36.0				31.0	31.0	
Actuated g/C Ratio			0.48	0.48		0.48				0.41	0.41	
Clearance Time (s)			6.0	6.0		6.0				5.0	5.0	
Vehicle Extension (s)			3.0	3.0		3.0				3.0	3.0	
Lane Grp Cap (vph)			198	480		576				250	913	
v/s Ratio Prot											0.28	
v/s Ratio Perm			c2.04	0.02		0.83				0.03		
v/c Ratio			4.24	0.05		4.83dl				0.06	0.68	
Uniform Delay, d1			19.5	10.4		19.5				13.3	18.0	
Progression Factor			1.06	1.09		1.00				1.00	1.00	
Incremental Delay, d2			1457.9	0.0		335.6				0.5	4.2	
Delay (s)			1478.5	11.3		355.1				13.7	22.1	
Level of Service			F	B		F				B	C	
Approach Delay (s)			1396.0			355.1					21.9	
Approach LOS			F			F					C	

Intersection Summary

HCM Average Control Delay	468.2	HCM Level of Service	F
HCM Volume to Capacity ratio	2.78		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	188.2%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	NWL	NWT	NWR	NWR2
Lane Configurations				
Ideal Flow (vphpl)	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	
Satd. Flow (prot)	1118	1176	1000	
Flt Permitted	0.33	1.00	1.00	
Satd. Flow (perm)	391	1176	1000	
Volume (vph)	154	265	111	447
Peak-hour factor, PHF	0.96	0.96	0.96	0.96
Adj. Flow (vph)	160	276	116	466
RTOR Reduction (vph)	0	0	131	0
Lane Group Flow (vph)	160	276	451	0
Turn Type	Perm		Perm	
Protected Phases		8		
Permitted Phases	8		8	
Actuated Green, G (s)	30.0	30.0	30.0	
Effective Green, g (s)	31.0	31.0	31.0	
Actuated g/C Ratio	0.41	0.41	0.41	
Clearance Time (s)	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	
Lane Grp Cap (vph)	162	486	413	
v/s Ratio Prot		0.23		
v/s Ratio Perm	0.41		c0.45	
v/c Ratio	0.99	0.57	1.09	
Uniform Delay, d1	21.8	16.9	22.0	
Progression Factor	1.13	1.03	1.27	
Incremental Delay, d2	18.5	0.4	45.8	
Delay (s)	43.2	17.9	73.7	
Level of Service	D	B	E	
Approach Delay (s)		53.7		
Approach LOS		D		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		1.00	0.86			1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98			0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	1.00	1.00
Satd. Flow (prot)	2168	4025		1118	3957			1121		1118	1176	1000
Flt Permitted	0.95	1.00		0.06	1.00			0.23		0.42	1.00	1.00
Satd. Flow (perm)	2168	4025		66	3957			268		489	1176	1000
Volume (vph)	213	2391	88	132	2377	412	372	339	177	252	454	303
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	224	2517	93	139	2502	434	392	357	186	265	478	319
RTOR Reduction (vph)	0	3	0	0	21	0	0	3	0	0	0	1
Lane Group Flow (vph)	224	2607	0	139	2915	0	0	932	0	265	478	318
Turn Type	Prot		Perm		Perm		Perm		Perm		pm+ov	
Protected Phases	5	2			6			4			4	5
Permitted Phases				6			4			4		4
Actuated Green, G (s)	16.5	92.0		71.5	71.5			49.0		49.0	49.0	65.5
Effective Green, g (s)	16.5	92.0		71.5	71.5			50.0		50.0	50.0	66.5
Actuated g/C Ratio	0.11	0.61		0.48	0.48			0.33		0.33	0.33	0.44
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0		5.0	5.0	4.0
Vehicle Extension (s)	1.5	4.0		4.0	4.0			3.0		3.0	3.0	1.5
Lane Grp Cap (vph)	238	2469		31	1886			89		163	392	470
v/s Ratio Prot	0.10	c0.65			0.74						0.41	0.07
v/s Ratio Perm				c2.11				c3.48		0.54		0.24
v/c Ratio	0.94	1.06		4.48	1.55			10.48		1.63	1.22	0.68
Uniform Delay, d1	66.3	29.0		39.2	39.2			50.0		50.0	50.0	33.2
Progression Factor	1.25	0.83		1.00	1.00			1.00		0.97	0.97	1.05
Incremental Delay, d2	7.6	26.3		1639.2	248.2			4286.3		292.0	107.5	1.2
Delay (s)	90.6	50.3		1678.5	287.5			4336.3		340.7	156.1	36.2
Level of Service	F	D		F	F			F		F	F	D
Approach Delay (s)		53.5			350.3			4336.3			166.1	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	690.6	HCM Level of Service	F
HCM Volume to Capacity ratio	6.21		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	204.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕	↗	↖	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.96		1.00	0.98		1.00	1.00	0.55	1.00	1.00	0.79
Flpb, ped/bikes	0.94	1.00		0.98	1.00		0.92	1.00	1.00	0.68	1.00	1.00
Frt	1.00	0.97		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1489	1549		1552	1607		1463	3167	776	1070	3167	1122
Flt Permitted	0.55	1.00		0.30	1.00		0.35	1.00	1.00	0.52	1.00	1.00
Satd. Flow (perm)	862	1549		489	1607		538	3167	776	587	3167	1122
Volume (vph)	48	317	84	169	291	47	133	329	155	23	553	191
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	50	330	88	176	303	49	139	343	161	24	576	199
RTOR Reduction (vph)	0	13	0	0	6	0	0	0	40	0	0	125
Lane Group Flow (vph)	50	405	0	176	346	0	139	343	121	24	576	74
Confl. Peds. (#/hr)	117		216	216		117	196		419	419		196
Confl. Bikes (#/hr)			5			6			8			20
Turn Type	Perm			pm+pt			Perm		pm+ov	Perm		Perm
Protected Phases		6		5	2			8	5		4	
Permitted Phases	6			2			8	8	4			4
Actuated Green, G (s)	27.6	27.6		37.6	37.6		27.0	27.0	33.5	27.0	27.0	27.0
Effective Green, g (s)	29.0	29.0		39.0	39.0		28.0	28.0	34.0	28.0	28.0	28.0
Actuated g/C Ratio	0.39	0.39		0.52	0.52		0.37	0.37	0.45	0.37	0.37	0.37
Clearance Time (s)	5.4	5.4		3.5	5.4		5.0	5.0	3.5	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	333	599		339	836		201	1182	393	219	1182	419
v/s Ratio Prot		c0.26		c0.04	0.22			0.11	0.02		0.18	
v/s Ratio Perm	0.06			0.23			c0.26		0.13	0.04		0.07
v/c Ratio	0.15	0.68		0.52	0.41		0.69	0.29	0.31	0.11	0.49	0.18
Uniform Delay, d1	15.0	19.1		11.4	11.0		19.9	16.5	13.0	15.4	18.0	15.8
Progression Factor	0.75	0.82		1.00	1.00		0.95	0.88	1.16	1.00	1.00	1.00
Incremental Delay, d2	0.9	5.8		1.3	1.5		15.5	0.5	0.4	1.0	1.4	0.9
Delay (s)	12.2	21.4		12.7	12.5		34.4	15.1	15.5	16.4	19.4	16.7
Level of Service	B	C		B	B		C	B	B	B	B	B
Approach Delay (s)		20.4			12.6			19.4			18.7	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	17.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↕			↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	1.00
Frbp, ped/bikes		1.00	1.00		0.91		1.00	0.93			1.00	0.30
Flpb, ped/bikes		0.98	1.00		0.95		0.85	1.00			0.97	1.00
Frt		1.00	0.85		0.97		1.00	0.98			1.00	0.85
Flt Protected		0.99	1.00		0.99		0.95	1.00			0.99	1.00
Satd. Flow (prot)		1614	1417		1384		1345	2887			3052	420
Flt Permitted		0.87	1.00		0.93		0.23	1.00			0.81	1.00
Satd. Flow (perm)		1410	1417		1301		319	2887			2489	420
Volume (vph)	39	164	122	67	337	132	177	495	58	96	773	61
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	40	169	126	69	347	136	182	510	60	99	797	63
RTOR Reduction (vph)	0	0	126	0	1	0	0	3	0	0	0	4
Lane Group Flow (vph)	0	209	0	0	551	0	182	567	0	0	896	59
Confl. Peds. (#/hr)	570		715	715		570	814		795	795		814
Confl. Bikes (#/hr)			9			12			43			28
Turn Type	Perm		NA	Perm			Perm			Perm		Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		2
Actuated Green, G (s)		30.5	0.0		30.5		34.1	34.1			34.1	34.1
Effective Green, g (s)		32.0	0.0		32.0		35.0	35.0			35.0	35.0
Actuated g/C Ratio		0.43	0.00		0.43		0.47	0.47			0.47	0.47
Clearance Time (s)		5.5			5.5		4.9	4.9			4.9	4.9
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		602	0		555		149	1347			1162	196
v/s Ratio Prot								0.20				
v/s Ratio Perm		0.15			c0.42		c0.57				0.36	0.14
v/c Ratio		0.35	0.00		0.99		1.22	0.42			0.77	0.30
Uniform Delay, d1		14.5	37.5		21.4		20.0	13.3			16.7	12.4
Progression Factor		1.00	1.00		1.00		1.00	1.00			1.73	1.85
Incremental Delay, d2		1.6	0.0		36.4		145.3	1.0			4.5	3.6
Delay (s)		16.1	37.5		57.8		165.3	14.2			33.3	26.5
Level of Service		B	D		E		F	B			C	C
Approach Delay (s)		24.1			57.8			50.8			32.9	
Approach LOS		C			E			D			C	
Intersection Summary												
HCM Average Control Delay			42.2				HCM Level of Service				D	
HCM Volume to Capacity ratio			1.11									
Actuated Cycle Length (s)			75.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			116.0%				ICU Level of Service			H		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕	↗		↕↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor		0.95			0.95			0.95	1.00		0.95	
Frbp, ped/bikes		0.80			0.98			1.00	0.54		0.98	
Flpb, ped/bikes		1.00			0.96			1.00	1.00		1.00	
Frt		0.90			0.99			1.00	0.85		0.99	
Flt Protected		1.00			0.98			1.00	1.00		1.00	
Satd. Flow (prot)		1605			2045			2235	540		2186	
Flt Permitted		0.91			0.54			1.00	1.00		0.95	
Satd. Flow (perm)		1465			1131			2235	540		2081	
Volume (vph)	22	202	432	300	355	30	0	880	517	5	1144	43
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	22	206	441	306	362	31	0	898	528	5	1167	44
RTOR Reduction (vph)	0	2	0	0	2	0	0	0	78	0	2	0
Lane Group Flow (vph)	0	667	0	0	697	0	0	898	450	0	1214	0
Conf. Peds. (#/hr)	238		195	195		238	518		548	548		518
Conf. Bikes (#/hr)			8			5			23			18
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		
Actuated Green, G (s)		61.5			61.5			78.0	78.0		78.0	
Effective Green, g (s)		63.0			63.0			79.0	79.0		79.0	
Actuated g/C Ratio		0.42			0.42			0.53	0.53		0.53	
Clearance Time (s)		5.5			5.5			5.0	5.0		5.0	
Vehicle Extension (s)		3.0			3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		615			475			1177	284		1096	
v/s Ratio Prot								0.40				
v/s Ratio Perm		0.46			c0.62				c0.83		0.58	
v/c Ratio		1.47dr			2.30dl			0.76	1.59		1.11	
Uniform Delay, d1		43.5			43.5			28.1	35.5		35.5	
Progression Factor		0.76			1.05			1.72	2.17		1.00	
Incremental Delay, d2		41.3			211.1			0.4	265.2		61.8	
Delay (s)		74.2			256.7			48.7	342.2		97.3	
Level of Service		E			F			D	F		F	
Approach Delay (s)		74.2			256.7			157.4			97.3	
Approach LOS		E			F			F			F	

Intersection Summary

HCM Average Control Delay	142.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	160.7%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑		↔↔	↑↑↑		↔	↑↑↑		↔	↑↑↑	↔
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		0.97	0.86		1.00	0.91		1.00	0.86	0.86
Frbp, ped/bikes	1.00	0.95		1.00	0.99		1.00	0.94		1.00	0.98	0.72
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.94	1.00	1.00
Frt	1.00	0.98		1.00	1.00		1.00	0.98		1.00	0.99	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	2168	3774		2168	3994		1118	2958		1046	2964	620
Flt Permitted	0.95	1.00		0.95	1.00		0.07	1.00		0.21	1.00	1.00
Satd. Flow (perm)	2168	3774		2168	3994		80	2958		227	2964	620
Volume (vph)	276	2382	374	74	2806	79	738	1036	185	297	1304	392
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	288	2481	390	77	2923	82	769	1079	193	309	1358	408
RTOR Reduction (vph)	0	19	0	0	3	0	0	17	0	0	4	1
Lane Group Flow (vph)	288	2852	0	77	3002	0	769	1255	0	309	1426	335
Conf. Peds. (#/hr)	260		298	298		260	247		442	442		247
Conf. Bikes (#/hr)			4			3			8			8
Turn Type	Prot			Prot		pm+pt			Perm		pm+ov	
Protected Phases	5	2		1	6	3	8			4	4	5
Permitted Phases						8				4		4
Actuated Green, G (s)	8.0	47.5		5.0	44.5	82.1	82.1		53.1	53.1	61.1	
Effective Green, g (s)	8.0	49.0		5.0	46.0	84.0	84.0		55.0	55.0	63.0	
Actuated g/C Ratio	0.05	0.33		0.03	0.31	0.56	0.56		0.37	0.37	0.42	
Clearance Time (s)	4.0	5.5		4.0	5.5	4.0	5.9		5.9	5.9	4.0	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	3.0	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	116	1233		72	1225	218	1656		83	1087	277	
v/s Ratio Prot	0.13	c0.76		0.04	c0.75	c0.59	0.42			0.48	0.06	
v/s Ratio Perm						1.39			c1.36		0.48	
v/c Ratio	2.48	2.31		1.07	2.45	3.53	0.76		3.72	1.31	1.21	
Uniform Delay, d1	71.0	50.5		72.5	52.0	50.0	25.2		47.5	47.5	43.5	
Progression Factor	1.20	0.93		1.16	1.22	1.00	1.00		1.05	1.05	1.13	
Incremental Delay, d2	669.6	591.2		52.1	653.1	1148.8	1.8		1228.0	141.0	97.2	
Delay (s)	754.9	638.3		136.0	716.4	1198.8	27.0		1277.6	190.8	146.3	
Level of Service	F	F		F	F	F	C		F	F	F	
Approach Delay (s)		648.9			701.9		468.5			345.4		
Approach LOS		F			F		F			F		

Intersection Summary

HCM Average Control Delay	568.3	HCM Level of Service	F
HCM Volume to Capacity ratio	3.19		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	202.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.94			0.95		1.00	0.98		1.00	0.98	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1094			1100		1118	2189		1118	2196	
Flt Permitted		0.68			0.67		0.15	1.00		0.15	1.00	
Satd. Flow (perm)		751			754		181	2189		181	2196	
Volume (vph)	110	103	153	359	242	323	60	1362	217	227	1292	170
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	128	120	178	417	281	376	70	1584	252	264	1502	198
RTOR Reduction (vph)	0	5	0	0	4	0	0	21	0	0	17	0
Lane Group Flow (vph)	0	421	0	0	1070	0	70	1815	0	264	1683	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		25.0			25.0		25.6	25.6		25.6	25.6	
Effective Green, g (s)		26.0			26.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio		0.43			0.43		0.43	0.43		0.43	0.43	
Clearance Time (s)		5.0			5.0		4.4	4.4		4.4	4.4	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		325			327		78	949		78	952	
v/s Ratio Prot								0.83			0.77	
v/s Ratio Perm		0.56			c1.42		0.39			c1.46		
v/c Ratio		1.30			3.27		0.90	1.91		3.38	1.77	
Uniform Delay, d1		17.0			17.0		15.8	17.0		17.0	17.0	
Progression Factor		1.00			1.00		0.31	0.31		1.00	1.00	
Incremental Delay, d2		153.8			1030.4		14.0	411.0		1104.9	349.8	
Delay (s)		170.8			1047.4		18.9	416.2		1121.9	366.8	
Level of Service		F			F		B	F		F	F	
Approach Delay (s)		170.8			1047.4			401.6			468.3	
Approach LOS		F			F			F			F	

Intersection Summary

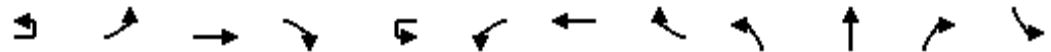
HCM Average Control Delay	536.9	HCM Level of Service	F
HCM Volume to Capacity ratio	3.32		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	219.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘		↗	↘		↗	↕		↗	↘	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	1103		1118	1160		1118	2207		1118	2195	
Flt Permitted	0.41	1.00		0.16	1.00		0.15	1.00		0.15	1.00	
Satd. Flow (perm)	488	1103		188	1160		174	2207		174	2195	
Volume (vph)	144	378	270	77	344	34	91	1528	139	44	1691	230
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	147	386	276	79	351	35	93	1559	142	45	1726	235
RTOR Reduction (vph)	0	3	0	0	5	0	0	12	0	0	18	0
Lane Group Flow (vph)	147	659	0	79	381	0	93	1689	0	45	1943	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		4		4		2		2		2	
Permitted Phases	4		4		4		2		2		2	
Actuated Green, G (s)	23.4	23.4		23.4	23.4		26.5	26.5		26.5	26.5	
Effective Green, g (s)	25.0	25.0		25.0	25.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.45	0.45		0.45	0.45	
Clearance Time (s)	5.6	5.6		5.6	5.6		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	203	460		78	483		78	993		78	988	
v/s Ratio Prot	c0.60		0.33		0.77		c0.89					
v/s Ratio Perm	0.30		0.42		0.53		0.26					
v/c Ratio	0.72	1.43		1.01	0.79		1.19	1.70		0.58	1.97	
Uniform Delay, d1	14.6	17.5		17.5	15.2		16.5	16.5		12.3	16.5	
Progression Factor	0.58	0.54		1.00	1.00		1.64	1.77		0.69	0.71	
Incremental Delay, d2	5.9	200.7		105.5	8.3		112.5	316.6		2.8	435.5	
Delay (s)	14.4	210.1		123.0	23.5		139.5	345.8		11.2	447.1	
Level of Service	B	F		F	C		F	F		B	F	
Approach Delay (s)	174.5		40.4		335.1		437.3					
Approach LOS	F		D		F		F					

Intersection Summary

HCM Average Control Delay	322.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.71		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	171.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔↔	↔↔↔	↔		↔↔	↔↔↔	↔	↔	↔↔		↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		0.97	0.91	1.00		0.97	0.91	1.00	1.00	0.95		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		3072	4550	1417		3072	4550	1417	1583	3164		1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.09	1.00		0.09
Satd. Flow (perm)		3072	4550	1417		3072	4550	1417	148	3164		144
Volume (vph)	3	297	2081	101	22	270	2037	351	163	1339	8	569
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	3	300	2102	102	22	273	2058	355	165	1353	8	575
RTOR Reduction (vph)	0	0	0	21	0	0	0	18	0	1	0	0
Lane Group Flow (vph)	0	303	2102	81	0	295	2058	337	165	1360	0	575
Turn Type	Prot	Prot	pm+ov		Prot	Prot	pm+ov	pm+pt				pm+pt
Protected Phases	1	1	6	3	5	5	2	7	3	8		7
Permitted Phases				6				2	8			4
Actuated Green, G (s)		15.8	29.5	40.3		16.0	29.7	41.7	53.1	42.3		55.5
Effective Green, g (s)		15.8	31.0	41.8		16.0	31.2	43.2	55.8	45.0		58.2
Actuated g/C Ratio		0.13	0.26	0.35		0.13	0.26	0.36	0.46	0.38		0.49
Clearance Time (s)		4.0	5.5	4.0		4.0	5.5	4.0	4.0	6.7		4.0
Vehicle Extension (s)		3.0	5.0	3.0		3.0	5.0	3.0	3.0	4.0		3.0
Lane Grp Cap (vph)		404	1175	541		410	1183	557	198	1187		214
v/s Ratio Prot		c0.10	c0.46	0.01		0.10	0.45	0.06	0.07	0.43		c0.27
v/s Ratio Perm				0.04				0.18	0.31			c1.03
v/c Ratio		0.75	1.79	0.15		0.72	1.74	0.61	0.83	1.15		2.69
Uniform Delay, d1		50.2	44.5	26.9		49.8	44.4	31.4	30.4	37.5		56.2
Progression Factor		1.54	0.64	0.15		1.57	0.79	0.05	1.00	1.00		1.32
Incremental Delay, d2		0.7	355.3	0.0		0.6	333.2	0.2	24.9	76.0		760.3
Delay (s)		78.2	384.0	4.1		78.6	368.2	1.8	55.2	113.5		834.6
Level of Service		E	F	A		E	F	A	E	F		F
Approach Delay (s)			331.6				288.7			107.2		
Approach LOS			F				F			F		

Intersection Summary			
HCM Average Control Delay	280.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.07		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	144.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Ideal Flow (vphpl)	1700	1700
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3167	1417
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3167	1417
Volume (vph)	1542	108
Peak-hour factor, PHF	0.99	0.99
Adj. Flow (vph)	1558	109
RTOR Reduction (vph)	0	44
Lane Group Flow (vph)	1558	65
Turn Type		Perm
Protected Phases	4	
Permitted Phases		4
Actuated Green, G (s)	43.5	43.5
Effective Green, g (s)	46.2	46.2
Actuated g/C Ratio	0.39	0.39
Clearance Time (s)	6.7	6.7
Vehicle Extension (s)	4.0	4.0
Lane Grp Cap (vph)	1219	546
v/s Ratio Prot	0.49	
v/s Ratio Perm		0.05
v/c Ratio	1.28	0.12
Uniform Delay, d1	36.9	23.8
Progression Factor	1.09	1.23
Incremental Delay, d2	125.8	0.0
Delay (s)	165.8	29.2
Level of Service	F	C
Approach Delay (s)	330.7	
Approach LOS	F	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑		
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	0.91		1.00	0.86		1.00	0.95		1.00	0.95		
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99		
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1583	4519		1583	5676		1583	3145		1583	3139		
Flt Permitted	0.14	1.00		0.12	1.00		0.15	1.00		0.13	1.00		
Satd. Flow (perm)	225	4519		198	5676		247	3145		215	3139		
Volume (vph)	50	2290	110	159	3107	221	78	1243	59	300	1477	93	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Adj. Flow (vph)	52	2385	115	166	3236	230	81	1295	61	312	1539	97	
RTOR Reduction (vph)	0	5	0	0	12	0	0	4	0	0	0	0	
Lane Group Flow (vph)	52	2495	0	166	3454	0	81	1353	0	312	1636	0	
Turn Type	Perm		pm+pt			Perm		pm+pt					
Protected Phases	2		1			6		8			7		4
Permitted Phases	2		6			8		4					
Actuated Green, G (s)	28.6	28.6		41.0	41.0		25.6	25.6		38.6	38.6		
Effective Green, g (s)	29.6	29.6		42.0	42.0		27.0	27.0		40.0	40.0		
Actuated g/C Ratio	0.33	0.33		0.47	0.47		0.30	0.30		0.44	0.44		
Clearance Time (s)	5.0	5.0		3.5	5.0		5.4	5.4		3.5	5.4		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	74	1486		222	2649		74	944		232	1395		
v/s Ratio Prot	c0.55		0.07			c0.61		0.43			c0.13		0.52
v/s Ratio Perm	0.23		0.28			0.33		c0.46					
v/c Ratio	0.70	1.68		0.75	1.30		1.09	1.43		1.34	1.17		
Uniform Delay, d1	26.4	30.2		20.6	24.0		31.5	31.5		42.7	25.0		
Progression Factor	1.74	1.70		2.09	0.54		0.95	0.93		1.00	1.00		
Incremental Delay, d2	5.0	305.7		1.3	137.1		117.7	199.3		181.1	85.7		
Delay (s)	50.9	357.1		44.2	150.0		147.7	228.6		223.8	110.7		
Level of Service	D		D			F		F			F		
Approach Delay (s)	350.9		145.1			224.0		128.8					
Approach LOS	F		F			F		F					

Intersection Summary

HCM Average Control Delay	208.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	135.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.99
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	4550	1417	1583	3167	1417	1583	3126	3126
Flt Permitted	0.14	1.00	1.00	0.14	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	227	4550	1417	227	4550	1417	1583	3167	1417	1583	3126	3126
Volume (vph)	181	1885	295	360	2281	377	291	792	78	273	1174	109
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	183	1904	298	364	2304	381	294	800	79	276	1186	110
RTOR Reduction (vph)	0	0	6	0	0	47	0	0	1	0	8	0
Lane Group Flow (vph)	183	1904	292	364	2304	334	294	800	78	276	1288	0
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	Prot		pm+ov		Prot	
Protected Phases	1	6	3	5	2	7	3	8	5	7	4	
Permitted Phases	6		6	2		2			8			
Actuated Green, G (s)	34.0	27.5	35.6	34.0	27.5	34.0	8.1	31.4	37.9	6.5	29.8	
Effective Green, g (s)	35.4	29.4	37.0	35.4	29.4	35.4	7.6	32.6	38.6	6.0	31.0	
Actuated g/C Ratio	0.39	0.33	0.41	0.39	0.33	0.39	0.08	0.36	0.43	0.07	0.34	
Clearance Time (s)	3.5	5.9	3.5	3.5	5.9	3.5	3.5	5.2	3.5	3.5	5.2	
Vehicle Extension (s)	3.0	5.0	3.0	3.0	5.0	3.0	3.0	5.0	3.0	3.0	5.0	
Lane Grp Cap (vph)	180	1486	583	180	1486	620	134	1147	671	106	1077	
v/s Ratio Prot	0.07	0.42	0.04	c0.14	0.51	0.04	c0.19	0.25	0.01	c0.17	c0.41	
v/s Ratio Perm	0.33		0.16	c0.66		0.20			0.05			
v/c Ratio	1.02	1.28	0.50	2.02	1.55	0.54	2.19	0.70	0.12	2.60	1.20	
Uniform Delay, d1	44.2	30.3	19.7	44.2	30.3	21.0	41.2	24.5	15.5	42.0	29.5	
Progression Factor	0.91	0.71	0.76	1.00	1.00	1.00	1.00	1.00	1.00	1.28	1.09	
Incremental Delay, d2	24.4	127.1	0.1	479.0	251.1	0.9	561.0	2.4	0.1	724.2	89.1	
Delay (s)	64.7	148.6	15.1	523.2	281.4	21.9	602.2	26.9	15.5	777.9	121.4	
Level of Service	E	F	B	F	F	C	F	C	B	F	F	
Approach Delay (s)		125.5			277.8			170.3			236.7	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	210.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	134.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 92: Le Conte Ave & Gayley Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.95		1.00	1.00	0.75	1.00	0.85		1.00	0.99	
Flpb, ped/bikes	0.84	1.00		0.66	1.00	1.00	0.94	1.00		0.88	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.91		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1325	1563		1047	1667	1062	1491	2468		1399	3124	
Flt Permitted	0.53	1.00		0.69	1.00	1.00	0.21	1.00		0.46	1.00	
Satd. Flow (perm)	739	1563		764	1667	1062	330	2468		673	3124	
Volume (vph)	9	82	10	287	199	84	102	197	275	139	991	26
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	10	87	11	305	212	89	109	210	293	148	1054	28
RTOR Reduction (vph)	0	6	0	0	0	64	0	36	0	0	2	0
Lane Group Flow (vph)	10	92	0	305	212	25	109	467	0	148	1080	0
Conf. Peds. (#/hr)	212		207	207		212	177		203	203		177
Conf. Bikes (#/hr)			13			9			15			12
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4	2			2		
Actuated Green, G (s)	20.2	20.2		20.2	20.2	20.2	45.3	45.3		45.3	45.3	
Effective Green, g (s)	21.0	21.0		21.0	21.0	21.0	46.0	46.0		46.0	46.0	
Actuated g/C Ratio	0.28	0.28		0.28	0.28	0.28	0.61	0.61		0.61	0.61	
Clearance Time (s)	4.8	4.8		4.8	4.8	4.8	4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	207	438		214	467	297	202	1514		413	1916	
v/s Ratio Prot		0.06			0.13			0.19			c0.35	
v/s Ratio Perm	0.01			c0.40		0.02	0.33			0.22		
v/c Ratio	0.05	0.21		1.43	0.45	0.08	0.54	0.31		0.36	0.56	
Uniform Delay, d1	19.7	20.7		27.0	22.3	19.9	8.4	6.9		7.2	8.6	
Progression Factor	1.00	1.00		1.02	1.01	1.26	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	1.1		214.1	2.9	0.5	10.0	0.5		2.4	1.2	
Delay (s)	20.1	21.8		241.6	25.4	25.5	18.3	7.4		9.6	9.8	
Level of Service	C	C		F	C	C	B	A		A	A	
Approach Delay (s)		21.6			134.3			9.4			9.8	
Approach LOS		C			F			A			A	

Intersection Summary			
HCM Average Control Delay	39.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕↕	↕	↕	↕↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes		0.99		1.00	0.86		1.00	1.00	0.72	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		0.98	1.00	1.00	0.94	1.00	
Frt		0.93		1.00	0.86		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1069		1118	862		1092	2235	722	1048	2234	
Flt Permitted		0.99		0.76	1.00		0.17	1.00	1.00	0.25	1.00	
Satd. Flow (perm)		1069		888	862		200	2235	722	271	2234	
Volume (vph)	1	1	2	224	8	193	3	847	160	494	1026	2
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1	1	2	229	8	197	3	864	163	504	1047	2
RTOR Reduction (vph)	0	2	0	0	133	0	0	0	84	0	0	0
Lane Group Flow (vph)	0	2	0	229	72	0	3	864	79	504	1049	0
Conf. Peds. (#/hr)	82						82	77		239	239	77
Conf. Bikes (#/hr)			2			6			9			5
Turn Type	Split			Perm			Perm			Perm custom		
Protected Phases	3	3			4			6			2	2
Permitted Phases				4			6		6	2	2	
Actuated Green, G (s)		1.4		23.4	23.4		35.6	35.6	35.6	35.6	35.6	
Effective Green, g (s)		2.4		24.4	24.4		36.2	36.2	36.2	36.2	36.2	
Actuated g/C Ratio		0.03		0.33	0.33		0.48	0.48	0.48	0.48	0.48	
Clearance Time (s)		5.0		5.0	5.0		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		34		289	280		97	1079	348	131	1078	
v/s Ratio Prot		c0.00			0.08			0.39				
v/s Ratio Perm				c0.26			0.02		0.11	c1.86	0.47	
v/c Ratio		0.06		0.79	0.26		0.03	0.80	0.23	3.85	0.97	
Uniform Delay, d1		35.2		23.0	18.6		10.2	16.4	11.3	19.4	18.9	
Progression Factor		1.00		1.85	4.80		0.91	1.12	1.84	1.00	1.00	
Incremental Delay, d2		0.8		1.4	0.0		0.1	0.6	0.1	1299.6	21.7	
Delay (s)		36.0		44.0	89.5		9.3	18.9	20.8	1319.0	40.6	
Level of Service		D		D	F		A	B	C	F	D	
Approach Delay (s)		36.0			65.5			19.2			455.5	
Approach LOS		D			E			B			F	

Intersection Summary			
HCM Average Control Delay	250.2	HCM Level of Service	F
HCM Volume to Capacity ratio	2.52		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	116.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑		↔	↑↑↑		↔	↑↑	↔	↔	↑	↔↔
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		1.00	0.86		1.00	0.95	1.00	1.00	1.00	0.88
Frbp, ped/bikes	1.00	0.97		1.00	0.97		1.00	1.00	0.68	1.00	1.00	0.79
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00	1.00	0.98	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3874		1110	3888		1118	2235	685	1093	1176	1395
Flt Permitted	0.95	1.00		0.06	1.00		0.10	1.00	1.00	0.56	1.00	1.00
Satd. Flow (perm)	2168	3874		75	3888		115	2235	685	649	1176	1395
Volume (vph)	332	2615	164	44	3510	326	374	297	83	295	482	536
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	346	2724	171	46	3656	340	390	309	86	307	502	558
RTOR Reduction (vph)	0	6	0	0	10	0	0	0	0	0	0	0
Lane Group Flow (vph)	346	2889	0	46	3986	0	390	309	86	307	502	558
Conf. Peds. (#/hr)	200		292	292		200	334		233	23		334
Conf. Bikes (#/hr)			4			9			6			5
Turn Type	Prot			Perm			pm+pt		Perm	Perm		pm+ov
Protected Phases	1	6			2		3	8			4	1
Permitted Phases				2			8		8	4		4
Actuated Green, G (s)	24.9	90.0		61.1	61.1		49.2	49.2	49.2	35.2	35.2	60.1
Effective Green, g (s)	24.9	91.0		62.1	62.1		51.0	51.0	51.0	37.0	37.0	61.9
Actuated g/C Ratio	0.17	0.61		0.41	0.41		0.34	0.34	0.34	0.25	0.25	0.41
Clearance Time (s)	4.0	5.0		5.0	5.0		4.0	5.8	5.8	5.8	5.8	4.0
Vehicle Extension (s)	2.0	4.0		4.0	4.0		2.0	3.0	3.0	3.0	3.0	2.0
Lane Grp Cap (vph)	360	2350		31	1610		106	760	233	160	290	613
v/s Ratio Prot	0.16	c0.75			c1.03		c0.25	0.14			0.43	0.15
v/s Ratio Perm				0.61			c1.01		0.13	0.47		0.25
v/c Ratio	0.96	1.23		1.48	2.48		3.68	0.41	0.37	1.92	1.73	0.91
Uniform Delay, d1	62.1	29.5		44.0	44.0		72.2	37.9	37.4	56.5	56.5	41.4
Progression Factor	0.86	1.49		0.48	0.49		1.00	1.00	1.00	0.91	0.91	1.06
Incremental Delay, d2	7.3	103.5		232.7	664.3		1228.5	0.4	1.0	426.4	337.1	11.1
Delay (s)	60.4	147.4		253.7	685.9		1300.7	38.3	38.3	478.0	388.8	55.3
Level of Service	E	F		F	F		F	D	D	F	F	E
Approach Delay (s)		138.1			681.0			665.5			272.7	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	434.1	HCM Level of Service	F
HCM Volume to Capacity ratio	2.67		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	191.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑		↖		↖		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0			
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00			
Frt		0.99		1.00	1.00		1.00		0.85			
Flt Protected		1.00		0.95	1.00		0.95		1.00			
Satd. Flow (prot)		3123		1583	3167		1583		1417			
Flt Permitted		1.00		0.09	1.00		0.76		1.00			
Satd. Flow (perm)		3123		155	3167		1262		1417			
Volume (vph)	0	1519	155	708	1695	0	386	0	867	0	0	0
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1566	160	730	1747	0	398	0	894	0	0	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	325	0	0	0
Lane Group Flow (vph)	0	1719	0	730	1747	0	398	0	569	0	0	0
Turn Type				pm+pt		custom		Over	Perm			
Protected Phases		2		1	6			1			4	
Permitted Phases				6			8			4		
Actuated Green, G (s)		38.0		81.0	81.0		30.0		39.0			
Effective Green, g (s)		39.0		82.0	82.0		30.0		39.0			
Actuated g/C Ratio		0.32		0.68	0.68		0.25		0.32			
Clearance Time (s)		5.0		4.0	5.0		4.0		4.0			
Vehicle Extension (s)		4.0		3.0	3.0		3.0		3.0			
Lane Grp Cap (vph)		1015		570	2164		316		461			
v/s Ratio Prot		c0.55		c0.42	0.55				0.40			
v/s Ratio Perm				0.46			c0.32					
v/c Ratio		1.69		1.28	0.81		1.26		1.23			
Uniform Delay, d1		40.5		42.7	13.4		45.0		40.5			
Progression Factor		1.00		0.94	0.93		1.00		1.00			
Incremental Delay, d2		316.5		136.7	2.6		139.9		122.7			
Delay (s)		357.0		176.8	15.1		184.9		163.2			
Level of Service		F		F	B		F		F			
Approach Delay (s)		357.0			62.7			169.9			0.0	
Approach LOS		F			E			F			A	

Intersection Summary

HCM Average Control Delay	180.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	130.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑		↔↔	↑↑↑		↔	↑↑	↔	↔	↑↑	↔↔
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		0.97	0.86		1.00	0.95	1.00	1.00	0.95	0.88
Frbp, ped/bikes	1.00	0.97		1.00	0.99		1.00	1.00	0.93	1.00	1.00	0.91
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3884		2168	3923		1118	2235	929	1106	2235	1593
Flt Permitted	0.95	1.00		0.95	1.00		0.10	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)	2168	3884		2168	3923		118	2235	929	201	2235	1593
Volume (vph)	284	2836	238	18	3657	689	231	822	331	152	734	1118
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	309	3083	259	20	3975	749	251	893	360	165	798	1215
RTOR Reduction (vph)	0	9	0	0	15	0	0	0	0	0	0	1
Lane Group Flow (vph)	309	3333	0	20	4709	0	251	893	360	165	798	1214
Conf. Peds. (#/hr)	16		128	128		16	73		33	33		73
Conf. Bikes (#/hr)			14			12			27			14
Turn Type	Prot			Prot		pm+pt		pm+ov	Perm		pm+ov	
Protected Phases	5	2		1	6	3	8	1		4	4	5
Permitted Phases						8		8	4			4
Actuated Green, G (s)	17.0	78.5		5.0	66.5	50.1	50.1	55.1	39.1	39.1	56.1	
Effective Green, g (s)	17.0	80.0		5.0	68.0	53.0	53.0	58.0	42.0	42.0	59.0	
Actuated g/C Ratio	0.11	0.53		0.03	0.45	0.35	0.35	0.39	0.28	0.28	0.39	
Clearance Time (s)	4.0	5.5		4.0	5.5	4.0	6.9	4.0	6.9	6.9	4.0	
Vehicle Extension (s)	1.0	4.0		1.0	4.0	3.0	2.0	1.0	2.0	2.0	1.0	
Lane Grp Cap (vph)	246	2071		72	1778	88	790	384	56	626	627	
v/s Ratio Prot	0.14	0.86		0.01	c1.20	c0.13	0.40	0.03		0.36	c0.22	
v/s Ratio Perm						c0.87		0.36	0.82		0.54	
v/c Ratio	1.26	1.61		0.28	2.65	2.85	1.13	0.94	2.95	1.27	1.94	
Uniform Delay, d1	66.5	35.0		70.7	41.0	43.0	48.5	44.3	54.0	54.0	45.5	
Progression Factor	0.66	0.36		1.30	0.47	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	118.4	274.5		0.1	742.0	863.9	74.3	29.8	922.1	135.8	427.0	
Delay (s)	162.5	287.0		92.1	761.1	906.9	122.8	74.1	976.1	189.8	472.5	
Level of Service	F	F		F	F	F	F	E	F	F	F	
Approach Delay (s)		276.4			758.3		242.0			407.1		
Approach LOS		F			F		F			F		

Intersection Summary			
HCM Average Control Delay	485.0	HCM Level of Service	F
HCM Volume to Capacity ratio	2.61		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	199.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑↑↑		↔	↑↑↑		↔	↑↑		↔	↑↑	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.86		0.97	0.81		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	4005		2168	4704		1118	2186		1118	2198	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1118	4005		2168	4704		1118	2186		1118	2198	
Volume (vph)	119	2505	186	504	3056	281	74	1239	215	302	1017	128
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	124	2609	194	525	3183	293	77	1291	224	315	1059	133
RTOR Reduction (vph)	0	7	0	0	11	0	0	9	0	0	6	0
Lane Group Flow (vph)	124	2796	0	525	3465	0	77	1506	0	315	1186	0
Turn Type	Prot		Prot		Prot		Prot		Prot			
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	12.0	63.7		21.0	72.7		12.9	33.0		12.8	32.9	
Effective Green, g (s)	12.0	65.2		21.0	74.2		12.9	35.0		12.8	34.9	
Actuated g/C Ratio	0.08	0.43		0.14	0.49		0.09	0.23		0.09	0.23	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	1.0	4.0		1.0	4.0		1.0	4.0		1.0	4.0	
Lane Grp Cap (vph)	89	1741		304	2327		96	510		95	511	
v/s Ratio Prot	0.11	c0.70		c0.24	0.74		0.07	c0.69		c0.28	0.54	
v/s Ratio Perm												
v/c Ratio	1.39	1.61		1.73	1.49		0.80	2.95		3.32	2.32	
Uniform Delay, d1	69.0	42.4		64.5	37.9		67.3	57.5		68.6	57.6	
Progression Factor	1.04	0.91		0.75	0.57		1.00	1.00		1.00	1.00	
Incremental Delay, d2	183.2	272.8		328.4	220.3		34.9	884.0		1068.6	600.4	
Delay (s)	255.0	311.4		376.8	242.0		102.2	941.5		1137.2	658.0	
Level of Service	F	F		F	F		F	F		F	F	
Approach Delay (s)		309.0			259.6			900.9			758.1	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	450.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.14		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	190.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗↗		↘	↗↗↗	↗	↘	↗↗	↗	↘	↗↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	4500		1583	4550	1417	1583	3167	1417	1583	3125	
Flt Permitted	0.12	1.00		0.95	1.00	1.00	0.11	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	207	4500		1583	4550	1417	185	3167	1417	185	3125	
Volume (vph)	120	2133	169	143	3163	188	25	1506	108	89	1165	111
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	122	2177	172	146	3228	192	26	1537	110	91	1189	113
RTOR Reduction (vph)	0	10	0	0	0	2	0	0	27	0	0	0
Lane Group Flow (vph)	122	2339	0	146	3228	190	26	1537	83	91	1302	0
Turn Type	Perm			Prot		Perm	Perm		Perm	Perm		
Protected Phases	8			7	4			6			2	
Permitted Phases	8					4	6		6		2	
Actuated Green, G (s)	31.2	31.2		10.3	45.0	45.0	35.0	35.0	35.0	35.0	35.0	
Effective Green, g (s)	32.2	32.2		9.8	46.0	46.0	36.0	36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.36	0.36		0.11	0.51	0.51	0.40	0.40	0.40	0.40	0.40	
Clearance Time (s)	5.0	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	74	1610		172	2326	724	74	1267	567	74	1250	
v/s Ratio Prot		0.52		0.09	c0.71			0.49			0.42	
v/s Ratio Perm	c0.59					0.13	0.14		0.06	c0.49		
v/c Ratio	1.65	1.45		0.85	1.39	0.26	0.35	1.21	0.15	1.23	1.04	
Uniform Delay, d1	28.9	28.9		39.4	22.0	12.4	18.8	27.0	17.2	27.0	27.0	
Progression Factor	0.80	0.77		1.08	0.55	0.22	1.01	0.91	1.15	1.00	1.00	
Incremental Delay, d2	331.9	206.3		3.7	174.8	0.1	1.2	96.6	0.0	178.7	37.0	
Delay (s)	355.0	228.4		46.3	186.8	2.8	20.2	121.1	19.8	205.7	64.0	
Level of Service	F	F		D	F	A	C	F	B	F	E	
Approach Delay (s)	234.7			171.2				112.8			73.2	
Approach LOS	F			F				F			E	

Intersection Summary

HCM Average Control Delay	162.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	144.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑↑		↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	4499		1583	3121		1583	3167	1417
Flt Permitted	0.18	1.00	1.00	0.15	1.00		0.95	1.00		0.11	1.00	1.00
Satd. Flow (perm)	303	4550	1417	256	4499		1583	3121		185	3167	1417
Volume (vph)	94	1814	232	222	1907	153	307	1578	166	171	1391	109
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	95	1832	234	224	1926	155	310	1594	168	173	1405	110
RTOR Reduction (vph)	0	0	10	0	10	0	0	9	0	0	0	7
Lane Group Flow (vph)	95	1832	224	224	2071	0	310	1753	0	173	1405	103
Turn Type	Perm		pm+ov	pm+pt			Prot			Perm		Perm
Protected Phases		6	3	5	2		3	8			4	
Permitted Phases	6		6	2						4		4
Actuated Green, G (s)	20.5	20.5	32.0	29.5	29.5		11.5	50.5		35.5	35.5	35.5
Effective Green, g (s)	22.0	22.0	33.0	31.0	31.0		11.0	51.0		36.0	36.0	36.0
Actuated g/C Ratio	0.24	0.24	0.37	0.34	0.34		0.12	0.57		0.40	0.40	0.40
Clearance Time (s)	5.5	5.5	3.5	3.0	5.5		3.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	2.0	3.0	3.0		2.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	1112	583	162	1550		193	1769		74	1267	567
v/s Ratio Prot		c0.40	0.05	0.08	c0.46		c0.20	0.56			0.44	
v/s Ratio Perm	0.31		0.11	0.40						c0.93		0.07
v/c Ratio	1.28	1.65	0.38	1.38	1.34		1.61	0.99		2.34	1.11	0.18
Uniform Delay, d1	34.0	34.0	21.0	44.7	29.5		39.5	19.3		27.0	27.0	17.5
Progression Factor	1.00	1.00	1.00	1.65	1.54		1.00	1.00		1.45	1.46	1.55
Incremental Delay, d2	198.5	295.4	0.2	175.8	151.5		295.6	19.4		615.1	53.2	0.2
Delay (s)	232.5	329.4	21.2	249.7	196.8		335.1	38.7		654.3	92.5	27.4
Level of Service	F	F	C	F	F		F	D		F	F	C
Approach Delay (s)		291.8			202.0			83.0			145.8	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	184.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.98		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	131.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑		↙	↑↑↑	↙	↙	↑↑	↙	↙↗	↙↗	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	0.86	0.86	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (prot)	1303	3742		1304	3747	1129	1304	2608	1137	2243	2286	
Flt Permitted	0.07	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (perm)	93	3742		1304	3747	1129	1304	2608	1137	2243	2286	
Volume (vph)	22	1547	10	45	1759	1258	142	320	242	1017	230	7
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	22	1579	10	46	1795	1284	145	327	247	1038	235	7
RTOR Reduction (vph)	0	1	0	0	0	354	0	0	0	0	1	0
Lane Group Flow (vph)	22	1588	0	46	1795	930	145	327	247	692	587	0
Conf. Peds. (#/hr)	11		9	9		11	58		11	11		58
Conf. Bikes (#/hr)			6			8			10			4
Turn Type	Perm			Prot		Perm	Split		pm+ov	Split		
Protected Phases		6		5	2		3	3	5	4	4	
Permitted Phases	6					2			3			
Actuated Green, G (s)	59.2	59.2		10.0	73.2	73.2	21.8	21.8	31.8	40.0	40.0	
Effective Green, g (s)	60.2	60.2		10.0	74.2	74.2	22.8	22.8	32.8	41.0	41.0	
Actuated g/C Ratio	0.40	0.40		0.07	0.49	0.49	0.15	0.15	0.22	0.27	0.27	
Clearance Time (s)	5.0	5.0		4.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0		2.0	4.0	4.0	2.0	2.0	2.0	4.0	4.0	
Lane Grp Cap (vph)	37	1502		87	1854	558	198	396	249	613	625	
v/s Ratio Prot		0.42		0.04	0.48		0.11	0.13	c0.07	c0.31	0.26	
v/s Ratio Perm	0.24					c0.82			0.15			
v/c Ratio	0.59	1.06		0.53	0.97	1.67	0.73	0.83	0.99	1.13	1.06dl	
Uniform Delay, d1	35.3	44.9		67.7	36.8	37.9	60.7	61.7	58.5	54.5	53.3	
Progression Factor	1.67	1.68		1.17	0.98	3.74	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	42.4	37.1		0.2	2.3	300.9	11.4	12.6	54.5	77.3	22.2	
Delay (s)	101.4	112.4		79.6	38.5	442.6	72.1	74.2	113.0	131.8	75.5	
Level of Service	F	F		E	D	F	E	E	F	F	E	
Approach Delay (s)		112.3			205.1			87.1			105.9	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	151.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	145.9%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑	↗		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	0.98		1.00	1.00	0.85		0.99			1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.99	
Satd. Flow (prot)	1583	4476		1583	3167	1417		1655			3111	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.88			0.56	
Satd. Flow (perm)	1583	4476		1583	3167	1417		1452			1781	
Volume (vph)	188	966	117	90	1134	145	10	888	47	207	562	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	198	1017	123	95	1194	153	11	935	49	218	592	26
RTOR Reduction (vph)	0	13	0	0	0	86	0	1	0	0	3	0
Lane Group Flow (vph)	198	1127	0	95	1194	67	0	994	0	0	833	0
Turn Type	Prot			Prot		Perm	Prot				Prot	
Protected Phases	1	6		5	2		3	8			7	4
Permitted Phases						2						
Actuated Green, G (s)	12.8	43.4		8.3	38.9	38.9		26.0			26.0	
Effective Green, g (s)	12.8	43.7		8.3	39.2	39.2		26.0			26.0	
Actuated g/C Ratio	0.14	0.49		0.09	0.44	0.44		0.29			0.29	
Clearance Time (s)	4.0	4.3		4.0	4.3	4.3		4.0			4.0	
Vehicle Extension (s)	3.0	5.7		3.0	5.5	5.5		3.0			3.0	
Lane Grp Cap (vph)	225	2173		146	1379	617		419			515	
v/s Ratio Prot	c0.13	0.25		0.06	c0.38							
v/s Ratio Perm						0.05		c0.68			0.47	
v/c Ratio	0.88	0.52		0.65	0.87	0.11		2.37			54.50dl	
Uniform Delay, d1	37.8	15.9		39.5	23.0	15.0		32.0			32.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	30.3	0.9		9.9	7.5	0.4		624.4			286.9	
Delay (s)	68.2	16.8		49.4	30.5	15.4		656.4			318.9	
Level of Service	E	B		D	C	B		F			F	
Approach Delay (s)		24.4			30.2			656.4			318.9	
Approach LOS		C			C			F			F	

Intersection Summary

HCM Average Control Delay	216.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	141.0%	ICU Level of Service	H
Analysis Period (min)	15		
dl	Defacto Left Lane. Recode with 1 though lane as a left lane.		
dr	Defacto Right Lane. Recode with 1 though lane as a right lane.		
c	Critical Lane Group		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑	↗	↗	↑↑	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		0.95	1.00		0.92	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	3729		1296	3740		1237	2608		1194	2483	
Flt Permitted	0.07	1.00		0.10	1.00		0.20	1.00		0.57	1.00	
Satd. Flow (perm)	99	3729		143	3740		258	2608		722	2483	
Volume (vph)	618	1571	28	70	1835	10	99	205	0	37	568	78
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	644	1636	29	73	1911	10	103	214	0	39	592	81
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	7	0
Lane Group Flow (vph)	644	1664	0	73	1921	0	103	214	0	39	666	0
Conf. Peds. (#/hr)	63		61	61		63	79		72	72		79
Conf. Bikes (#/hr)			9			13			4			9
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		6			2			8				4
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	97.5	97.5		97.5	97.5		44.0	44.0		44.0	44.0	
Effective Green, g (s)	98.0	98.0		98.0	98.0		44.0	44.0		44.0	44.0	
Actuated g/C Ratio	0.65	0.65		0.65	0.65		0.29	0.29		0.29	0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	65	2436		93	2443		76	765		212	728	
v/s Ratio Prot		0.45			0.51			0.08			0.27	
v/s Ratio Perm	c6.49			0.51			c0.40			0.05		
v/c Ratio	9.91	0.68		0.78	0.79		1.36	0.28		0.18	0.91	
Uniform Delay, d1	26.0	16.3		18.5	18.5		53.0	40.8		39.6	51.2	
Progression Factor	1.00	1.00		1.66	1.80		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4039.0	1.6		21.1	1.0		224.3	0.9		1.9	18.0	
Delay (s)	4065.0	17.9		51.8	34.3		277.3	41.7		41.5	69.2	
Level of Service	F	B		D	C		F	D		D	E	
Approach Delay (s)		1146.6			35.0			118.3			67.7	
Approach LOS		F			C			F			E	

Intersection Summary

HCM Average Control Delay	525.7	HCM Level of Service	F
HCM Volume to Capacity ratio	7.29		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	141.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.97			0.99		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1610			1644		1583	1664		1583	1667	1417
Flt Permitted		0.94			0.93		0.28	1.00		0.36	1.00	1.00
Satd. Flow (perm)		1514			1528		462	1664		599	1667	1417
Volume (vph)	66	395	125	19	216	18	93	510	5	93	621	77
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	69	411	130	20	225	19	97	531	5	97	647	80
RTOR Reduction (vph)	0	16	0	0	5	0	0	0	0	0	0	36
Lane Group Flow (vph)	0	594	0	0	259	0	97	536	0	97	647	44
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		6
Actuated Green, G (s)		18.5			18.5		32.7	32.7		32.7	32.7	32.7
Effective Green, g (s)		19.0			19.0		33.0	33.0		33.0	33.0	33.0
Actuated g/C Ratio		0.32			0.32		0.55	0.55		0.55	0.55	0.55
Clearance Time (s)		4.5			4.5		4.3	4.3		4.3	4.3	4.3
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		479			484		254	915		329	917	779
v/s Ratio Prot							0.32				c0.39	
v/s Ratio Perm		c0.39			0.17		0.21			0.16		0.03
v/c Ratio		1.24			0.54		0.38	0.59		0.29	0.71	0.06
Uniform Delay, d1		20.5			16.9		7.7	9.0		7.3	9.9	6.3
Progression Factor		1.00			1.00		1.06	0.94		1.00	1.00	1.00
Incremental Delay, d2		124.5			1.1		1.6	1.0		2.3	4.5	0.1
Delay (s)		145.0			18.0		9.8	9.5		9.5	14.5	6.4
Level of Service		F			B		A	A		A	B	A
Approach Delay (s)		145.0			18.0			9.5			13.1	
Approach LOS		F			B			A			B	

Intersection Summary

HCM Average Control Delay	47.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	107.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↑	↗	↖	↗	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	3700		1304	3719		1304	1373	1167	1304	1369	
Flt Permitted	0.17	1.00		0.17	1.00		0.29	1.00	1.00	0.28	1.00	
Satd. Flow (perm)	234	3700		234	3719		392	1373	1167	378	1369	
Volume (vph)	11	1660	150	118	1692	88	98	567	64	110	546	10
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	11	1694	153	120	1727	90	100	579	65	112	557	10
RTOR Reduction (vph)	0	18	0	0	9	0	0	0	2	0	1	0
Lane Group Flow (vph)	11	1829	0	120	1808	0	100	579	63	112	566	0
Turn Type	Perm			Perm			Perm			Perm	Perm	
Protected Phases	2			2			4			4	4	
Permitted Phases	2			2			4			4	4	
Actuated Green, G (s)	22.9	22.9		22.9	22.9		27.5	27.5	27.5	27.5	27.5	
Effective Green, g (s)	23.5	23.5		23.5	23.5		28.5	28.5	28.5	28.5	28.5	
Actuated g/C Ratio	0.39	0.39		0.39	0.39		0.48	0.48	0.48	0.48	0.48	
Clearance Time (s)	4.6	4.6		4.6	4.6		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)	92	1449		92	1457		186	652	554	180	650	
v/s Ratio Prot		0.49			0.49			c0.42			0.41	
v/s Ratio Perm	0.05			c0.51			0.26		0.05	0.30		
v/c Ratio	0.12	1.26		1.30	1.24		0.54	0.89	0.11	0.62	0.87	
Uniform Delay, d1	11.6	18.2		18.2	18.2		11.1	14.3	8.7	11.7	14.1	
Progression Factor	1.00	1.00		1.40	1.41		1.00	1.00	1.00	0.63	0.70	
Incremental Delay, d2	2.6	123.8		181.1	112.6		10.7	16.5	0.4	9.2	9.5	
Delay (s)	14.3	142.1		206.6	138.4		21.8	30.8	9.2	16.7	19.3	
Level of Service	B	F		F	F		C	C	A	B	B	
Approach Delay (s)		141.3			142.6			27.7			18.9	
Approach LOS		F			F			C			B	

Intersection Summary

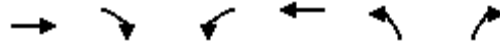
HCM Average Control Delay	109.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	131.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑	↗	↘	↑↑		↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.86	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4456		1583	5733	1417	1583	3080		1583	3167	1417
Flt Permitted	0.12	1.00		0.12	1.00	1.00	0.11	1.00		0.18	1.00	1.00
Satd. Flow (perm)	196	4456		196	5733	1417	185	3080		299	3167	1417
Volume (vph)	118	1338	214	238	1882	293	167	711	158	226	1234	58
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	123	1394	223	248	1960	305	174	741	165	235	1285	60
RTOR Reduction (vph)	0	24	0	0	0	50	0	21	0	0	0	24
Lane Group Flow (vph)	123	1593	0	248	1960	255	174	885	0	235	1285	36
Turn Type	Perm			Perm		pm+ov	pm+pt			pm+pt		Perm
Protected Phases		6			2	7	3	8		7	4	
Permitted Phases	6			2		2	8			4		4
Actuated Green, G (s)	33.0	33.0		33.0	33.0	41.0	42.1	34.1		42.1	34.1	34.1
Effective Green, g (s)	34.0	34.0		34.0	34.0	42.0	44.0	36.0		44.0	36.0	36.0
Actuated g/C Ratio	0.38	0.38		0.38	0.38	0.47	0.49	0.40		0.49	0.40	0.40
Clearance Time (s)	5.0	5.0		5.0	5.0	4.0	4.0	5.9		4.0	5.9	5.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	1683		74	2166	724	215	1232		260	1267	567
v/s Ratio Prot		0.36			0.34	0.03	0.07	0.29		c0.08	c0.41	
v/s Ratio Perm	0.63			c1.26		0.15	0.32			0.36		0.03
v/c Ratio	1.66	0.95		3.35	0.90	0.35	0.81	0.72		0.90	1.01	0.06
Uniform Delay, d1	28.0	27.1		28.0	26.5	15.3	18.8	22.7		16.2	27.0	16.6
Progression Factor	1.00	1.00		0.85	0.83	1.38	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	350.0	12.4		1061.2	0.7	0.0	19.7	3.6		31.6	28.9	0.2
Delay (s)	378.0	39.6		1085.0	22.8	21.2	38.5	26.4		47.8	55.9	16.8
Level of Service	F	D		F	C	C	D	C		D	E	B
Approach Delay (s)		63.5			127.4			28.3			53.2	
Approach LOS		E			F			C			D	

Intersection Summary

HCM Average Control Delay	78.9	HCM Level of Service	E
HCM Volume to Capacity ratio	2.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	110.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	0.99		1.00	1.00	0.96	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3692		1304	3747	1272	
Flt Permitted	1.00		0.07	1.00	0.97	
Satd. Flow (perm)	3692		99	3747	1272	
Volume (vph)	1997	218	66	1927	218	94
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	2080	227	69	2007	227	98
RTOR Reduction (vph)	13	0	0	0	4	0
Lane Group Flow (vph)	2294	0	69	2007	321	0
Turn Type			Perm			
Protected Phases	6			2	4	
Permitted Phases			2			
Actuated Green, G (s)	55.3		55.3	55.3	25.9	
Effective Green, g (s)	55.4		55.4	55.4	26.6	
Actuated g/C Ratio	0.62		0.62	0.62	0.30	
Clearance Time (s)	4.1		4.1	4.1	4.7	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2273		61	2306	376	
v/s Ratio Prot	0.62			0.54	c0.25	
v/s Ratio Perm			c0.70			
v/c Ratio	1.01		1.13	0.87	0.85	
Uniform Delay, d1	17.3		17.3	14.3	29.9	
Progression Factor	0.51		1.00	1.00	1.00	
Incremental Delay, d2	17.3		155.6	4.8	16.8	
Delay (s)	26.1		172.9	19.2	46.7	
Level of Service	C		F	B	D	
Approach Delay (s)	26.1			24.3	46.7	
Approach LOS	C			C	D	
Intersection Summary						
HCM Average Control Delay			26.7		HCM Level of Service	C
HCM Volume to Capacity ratio			1.04			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			101.5%		ICU Level of Service	G
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99			0.94			1.00	0.94
Flpb, ped/bikes	0.99	1.00		1.00	1.00			0.99			0.98	1.00
Frt	1.00	1.00		1.00	1.00			0.90			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.97	1.00
Satd. Flow (prot)	1292	3723		1300	3697			1147			1307	1095
Flt Permitted	0.07	1.00		0.07	1.00			0.95			0.76	1.00
Satd. Flow (perm)	90	3723		90	3697			1095			1025	1095
Volume (vph)	49	1910	47	84	1909	58	33	26	151	40	36	45
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	51	1990	49	88	1989	60	34	27	157	42	38	47
RTOR Reduction (vph)	0	2	0	0	3	0	0	6	0	0	0	4
Lane Group Flow (vph)	51	2037	0	88	2046	0	0	212	0	0	80	43
Conf. Peds. (#/hr)	123		38	38		123	46		63	63		46
Conf. Bikes (#/hr)			7			9						1
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	60.7	60.7		60.7	60.7			21.3			21.3	21.3
Effective Green, g (s)	60.7	60.7		60.7	60.7			21.3			21.3	21.3
Actuated g/C Ratio	0.67	0.67		0.67	0.67			0.24			0.24	0.24
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	61	2511		61	2493			259			243	259
v/s Ratio Prot		0.55			0.55							
v/s Ratio Perm	0.57			c0.98				c0.19			0.08	0.04
v/c Ratio	0.84	0.81		1.44	0.82			0.82			0.33	0.17
Uniform Delay, d1	10.9	10.5		14.6	10.7			32.5			28.4	27.3
Progression Factor	2.55	2.85		0.71	0.67			1.00			1.00	1.00
Incremental Delay, d2	11.7	0.3		237.0	1.5			17.9			0.8	0.3
Delay (s)	39.6	30.3		247.5	8.7			50.4			29.2	27.6
Level of Service	D	C		F	A			D			C	C
Approach Delay (s)		30.5			18.6			50.4			28.6	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↙	↑↑	↙↘	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (prot)	3167	1417	1583	3167	3013	
Flt Permitted	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (perm)	3167	1417	1583	3167	3013	
Volume (vph)	1390	821	95	1556	515	137
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1463	864	100	1638	542	144
RTOR Reduction (vph)	0	76	0	0	27	0
Lane Group Flow (vph)	1463	788	100	1638	659	0
Turn Type		pt+ov	Prot			
Protected Phases	2	2 4	1	6	4	
Permitted Phases						
Actuated Green, G (s)	40.6	73.9	9.0	37.1	29.4	
Effective Green, g (s)	40.5	73.5	8.5	37.0	29.0	
Actuated g/C Ratio	0.45	0.82	0.09	0.41	0.32	
Clearance Time (s)	3.9		3.5	3.9	3.6	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1425	1157	150	1302	971	
v/s Ratio Prot	c0.46	c0.56	c0.06	c0.52	0.22	
v/s Ratio Perm						
v/c Ratio	1.03	0.68	0.67	1.26	0.68	
Uniform Delay, d1	24.8	3.4	39.4	26.5	26.5	
Progression Factor	0.84	0.80	1.00	1.00	1.00	
Incremental Delay, d2	25.9	1.0	10.7	122.5	1.9	
Delay (s)	46.7	3.7	50.0	149.0	28.4	
Level of Service	D	A	D	F	C	
Approach Delay (s)	30.7			143.3	28.4	
Approach LOS	C			F	C	

Intersection Summary

HCM Average Control Delay	71.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑		↙	↑↑↑		↙	↑↑		↙	↑↑	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.98		1.00	1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	3696		1304	3641		1302	2607		1304	2506	
Flt Permitted	0.13	1.00		0.13	1.00		0.13	1.00		0.14	1.00	
Satd. Flow (perm)	176	3696		176	3641		180	2607		191	2506	
Volume (vph)	112	1836	95	126	1548	109	211	1176	2	104	745	123
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	115	1893	98	130	1596	112	218	1212	2	107	768	127
RTOR Reduction (vph)	0	7	0	0	9	0	0	0	0	0	14	0
Lane Group Flow (vph)	115	1984	0	130	1699	0	218	1214	0	107	881	0
Conf. Peds. (#/hr)	105		77	77		105	97		104	104		97
Conf. Bikes (#/hr)			5			11			3			7
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	36.2	30.2		36.2	30.2		37.4	29.4		34.2	27.8	
Effective Green, g (s)	37.2	31.2		37.2	31.2		38.4	30.4		35.2	28.8	
Actuated g/C Ratio	0.41	0.35		0.41	0.35		0.43	0.34		0.39	0.32	
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	148	1281		148	1262		177	881		154	802	
v/s Ratio Prot	0.05	c0.54		c0.06	0.47		c0.11	c0.47		0.05	0.35	
v/s Ratio Perm	0.27			0.30			0.42			0.22		
v/c Ratio	0.78	1.55		0.88	1.35		1.23	1.38		0.69	1.10	
Uniform Delay, d1	21.5	29.4		22.6	29.4		20.6	29.8		22.4	30.6	
Progression Factor	1.33	0.98		1.45	0.75		1.43	1.33		1.00	1.00	
Incremental Delay, d2	8.0	248.4		26.4	158.8		118.7	172.3		12.8	62.0	
Delay (s)	36.5	277.1		59.2	181.0		148.1	212.0		35.2	92.6	
Level of Service	D	F		E	F		F	F		D	F	
Approach Delay (s)		264.0			172.4			202.3			86.5	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	195.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	126.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frbp, ped/bikes		0.98			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.98			0.99			0.99	
Flt Protected		1.00			0.99			1.00			1.00	
Satd. Flow (prot)		1548			1616			3131			3119	
Flt Permitted		0.94			0.72			0.79			0.80	
Satd. Flow (perm)		1467			1177			2468			2487	
Volume (vph)	31	243	163	48	228	36	45	1196	50	43	1180	68
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	35	276	185	55	259	41	51	1359	57	49	1341	77
RTOR Reduction (vph)	0	23	0	0	5	0	0	3	0	0	5	0
Lane Group Flow (vph)	0	473	0	0	350	0	0	1464	0	0	1462	0
Conf. Peds. (#/hr)	28		18	18		28	29		26	26		29
Conf. Bikes (#/hr)			4			2			1			6
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			55.6			55.6	
Effective Green, g (s)		26.0			26.0			56.0			56.0	
Actuated g/C Ratio		0.29			0.29			0.62			0.62	
Clearance Time (s)		4.0			4.0			4.4			4.4	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		424			340			1536			1547	
v/s Ratio Prot												
v/s Ratio Perm		0.32			0.30			0.59			0.59	
v/c Ratio		1.11			1.03			0.95			0.95	
Uniform Delay, d1		32.0			32.0			15.8			15.6	
Progression Factor		1.00			1.00			1.00			1.06	
Incremental Delay, d2		78.6			56.6			14.2			9.1	
Delay (s)		110.6			88.6			30.0			25.5	
Level of Service		F			F			C			C	
Approach Delay (s)		110.6			88.6			30.0			25.5	
Approach LOS		F			F			C			C	
Intersection Summary												
HCM Average Control Delay			44.3					HCM Level of Service			D	
HCM Volume to Capacity ratio			1.00									
Actuated Cycle Length (s)			90.0					Sum of lost time (s)			8.0	
Intersection Capacity Utilization			114.8%					ICU Level of Service			H	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑		↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00		0.91		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85		0.98		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	2608	1167		3678		1304	2608	1167	1304	2604	
Flt Permitted	0.08	1.00	1.00		1.00		0.20	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	106	2608	1167		3678		270	2608	1167	153	2604	
Volume (vph)	55	1366	212	0	1341	188	58	1190	220	199	925	10
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	56	1394	216	0	1368	192	59	1214	224	203	944	10
RTOR Reduction (vph)	0	0	45	0	15	0	0	0	8	0	1	0
Lane Group Flow (vph)	56	1394	171	0	1545	0	59	1214	216	203	953	0
Turn Type	Perm		Perm		Perm		Perm		Perm	Perm	Perm	
Protected Phases	4		8		2		6					
Permitted Phases	4	4		8		2		2	6			
Actuated Green, G (s)	53.0	53.0	53.0	53.0		57.0	57.0	57.0	57.0	57.0	57.0	
Effective Green, g (s)	54.0	54.0	54.0	54.0		58.0	58.0	58.0	58.0	58.0	58.0	
Actuated g/C Ratio	0.45	0.45	0.45	0.45		0.48	0.48	0.48	0.48	0.48	0.48	
Clearance Time (s)	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	48	1174	525	1655		131	1261	564	74	1259		
v/s Ratio Prot	c0.53		0.42		0.47		0.37					
v/s Ratio Perm	0.53	0.15		0.22		0.18		c1.33				
v/c Ratio	1.17	1.19	0.33	0.93		0.45	0.96	0.38	2.74	0.76		
Uniform Delay, d1	33.0	33.0	21.3	31.3		20.5	30.0	19.6	31.0	25.3		
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	182.7	93.1	1.7	11.1		10.8	17.9	2.0	821.0	4.3		
Delay (s)	215.7	126.1	22.9	42.4		31.3	47.8	21.6	852.0	29.6		
Level of Service	F	F	C	D		C	D	C	F	C		
Approach Delay (s)	115.8		42.4		43.2		173.9					
Approach LOS	F		D		D		F					

Intersection Summary

HCM Average Control Delay	89.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	132.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘↗	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	3072	4550	1417	1583	3167	1417	1583	3167	1417
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1583	4550	1417	3072	4550	1417	1583	3167	1417	1583	3167	1417
Volume (vph)	237	1699	569	209	1573	252	287	1572	255	71	969	131
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	247	1770	593	218	1639	262	299	1638	266	74	1009	136
RTOR Reduction (vph)	0	0	17	0	0	144	0	0	64	0	0	4
Lane Group Flow (vph)	247	1770	576	218	1639	118	299	1638	202	74	1009	132
Turn Type	Prot	pm+ov		Prot	Perm		Prot	pm+ov		Prot	pm+ov	
Protected Phases	3	8	1	7	4		1	6	7	5	2	3
Permitted Phases			8			4			6			2
Actuated Green, G (s)	13.0	37.8	50.8	12.2	37.0	37.0	13.0	40.9	53.1	9.1	37.0	50.0
Effective Green, g (s)	13.0	39.8	52.8	12.2	39.0	39.0	13.0	42.9	55.1	9.1	39.0	52.0
Actuated g/C Ratio	0.11	0.33	0.44	0.10	0.32	0.32	0.11	0.36	0.46	0.08	0.32	0.43
Clearance Time (s)	4.0	6.0	4.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0
Vehicle Extension (s)	3.0	4.7	3.0	3.0	5.0	5.0	3.0	4.5	3.0	3.0	4.6	3.0
Lane Grp Cap (vph)	171	1509	671	312	1479	461	171	1132	698	120	1029	661
v/s Ratio Prot	c0.16	c0.39	0.09	0.07	0.36		c0.19	c0.52	0.03	0.05	0.32	0.02
v/s Ratio Perm			0.31			0.08			0.11			0.07
v/c Ratio	1.44	1.17	0.86	0.70	1.11	0.26	1.75	1.45	0.29	0.62	0.98	0.20
Uniform Delay, d1	53.5	40.1	30.2	52.1	40.5	29.8	53.5	38.5	20.2	53.8	40.1	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.18	0.74	0.33	1.00	1.00	1.00
Incremental Delay, d2	229.8	85.2	10.6	6.7	59.0	0.6	355.9	205.3	0.2	9.1	23.8	0.1
Delay (s)	283.3	125.3	40.8	58.8	99.5	30.4	418.9	234.0	6.9	62.8	63.9	21.2
Level of Service	F	F	D	E	F	C	F	F	A	E	E	C
Approach Delay (s)		121.1			86.8			231.7			59.1	
Approach LOS		F			F			F			E	

Intersection Summary

HCM Average Control Delay	132.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.97		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	3063		1583	3098		1583	4454		1583	3167	1417
Flt Permitted	0.10	1.00		0.07	1.00		0.12	1.00		0.12	1.00	1.00
Satd. Flow (perm)	164	3063		123	3098		196	4454		196	3167	1417
Volume (vph)	137	1395	389	207	1001	171	312	1042	170	230	1327	146
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	140	1423	397	211	1021	174	318	1063	173	235	1354	149
RTOR Reduction (vph)	0	21	0	0	12	0	0	19	0	0	0	31
Lane Group Flow (vph)	140	1799	0	211	1183	0	318	1217	0	235	1354	118
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt		pm+pt		pm+ov	
Protected Phases	1	6		5	2		3	8		7	4	1
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	61.5	53.0		61.5	53.0		41.5	33.0		41.5	33.0	41.5
Effective Green, g (s)	62.0	54.0		62.0	54.0		42.0	34.0		42.0	34.0	42.0
Actuated g/C Ratio	0.52	0.45		0.52	0.45		0.35	0.28		0.35	0.28	0.35
Clearance Time (s)	3.5	5.0		3.5	5.0		3.5	5.0		3.5	5.0	3.5
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	4.3		3.0	4.6	3.0
Lane Grp Cap (vph)	179	1378		161	1394		161	1262		161	897	543
v/s Ratio Prot	0.05	0.59		c0.09	0.38		c0.13	0.27		0.10	0.43	0.01
v/s Ratio Perm	0.35			c0.59			c0.56			0.41		0.07
v/c Ratio	0.78	1.31		1.31	0.85		1.98	0.96		1.46	1.51	0.22
Uniform Delay, d1	21.8	33.0		58.2	29.4		58.2	42.4		33.5	43.0	27.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.29	1.19	1.72
Incremental Delay, d2	19.6	142.7		177.0	6.6		460.4	17.6		220.2	231.6	0.1
Delay (s)	41.4	175.7		235.2	36.0		518.6	60.0		263.3	282.9	47.2
Level of Service	D	F		F	D		F	E		F	F	D
Approach Delay (s)		166.1			65.9			153.8			260.1	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	166.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	143.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1583	3164		1583	3153			1608			1620	
Flt Permitted	0.15	1.00		0.14	1.00			0.99			0.89	
Satd. Flow (perm)	251	3164		226	3153			1592			1446	
Volume (vph)	164	1797	10	49	1074	32	13	368	127	41	209	46
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	171	1872	10	51	1119	33	14	383	132	43	218	48
RTOR Reduction (vph)	0	1	0	0	3	0	0	3	0	0	11	0
Lane Group Flow (vph)	171	1881	0	51	1149	0	0	527	0	0	298	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	6		2		2		8		8		4	
Permitted Phases	6		2		2		8		8		4	
Actuated Green, G (s)	29.2	29.2		29.2	29.2			21.6			21.6	
Effective Green, g (s)	29.5	29.5		29.5	29.5			22.5			22.5	
Actuated g/C Ratio	0.49	0.49		0.49	0.49			0.38			0.38	
Clearance Time (s)	4.3	4.3		4.3	4.3			4.9			4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	123	1556		111	1550			597			542	
v/s Ratio Prot		0.59			0.36							
v/s Ratio Perm	c0.68			0.23				c0.33			0.21	
v/c Ratio	1.39	1.21		0.46	0.74			0.88			0.55	
Uniform Delay, d1	15.2	15.2		10.0	12.2			17.5			14.8	
Progression Factor	1.97	2.08		1.00	1.00			1.00			1.00	
Incremental Delay, d2	180.2	94.7		13.1	3.2			14.3			1.1	
Delay (s)	210.3	126.5		23.1	15.4			31.8			15.9	
Level of Service	F	F		C	B			C			B	
Approach Delay (s)		133.5			15.8			31.8			15.9	
Approach LOS		F			B			C			B	

Intersection Summary

HCM Average Control Delay	76.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	113.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)					4.0			4.0		4.0	4.0	
Lane Util. Factor					1.00			0.95		1.00	0.95	
Frbp, ped/bikes					1.00			0.99		1.00	1.00	
Flpb, ped/bikes					0.99			1.00		1.00	1.00	
Frt					0.91			0.99		1.00	1.00	
Flt Protected					0.98			1.00		0.95	1.00	
Satd. Flow (prot)					1479			3118		1583	3167	
Flt Permitted					0.89			1.00		0.06	1.00	
Satd. Flow (perm)					1335			3118		108	3167	
Volume (vph)	0	0	0	96	0	173	0	1850	83	126	1535	0
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	0	0	0	110	0	199	0	2126	95	145	1764	0
RTOR Reduction (vph)	0	0	0	0	5	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	304	0	0	2218	0	145	1764	0
Conf. Peds. (#/hr)			20	20			47		58	58		47
Conf. Bikes (#/hr)			1						7			1
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)					29.5			62.0		62.0	62.0	
Effective Green, g (s)					30.0			62.0		62.0	62.0	
Actuated g/C Ratio					0.30			0.62		0.62	0.62	
Clearance Time (s)					4.5			4.0		4.0	4.0	
Vehicle Extension (s)					3.0			5.0		5.0	5.0	
Lane Grp Cap (vph)					401			1933		67	1964	
v/s Ratio Prot								0.71			0.56	
v/s Ratio Perm					c0.23					c1.35		
v/c Ratio					0.76			1.15		2.16	0.90	
Uniform Delay, d1					31.7			19.0		19.0	16.3	
Progression Factor					1.00			1.00		1.00	1.00	
Incremental Delay, d2					12.6			72.9		569.8	7.0	
Delay (s)					44.3			91.9		588.8	23.3	
Level of Service					D			F		F	C	
Approach Delay (s)		0.0			44.3			91.9			66.3	
Approach LOS		A			D			F			E	
Intersection Summary												
HCM Average Control Delay			77.6									HCM Level of Service E
HCM Volume to Capacity ratio			1.71									
Actuated Cycle Length (s)			100.0									Sum of lost time (s) 8.0
Intersection Capacity Utilization			98.8%									ICU Level of Service F
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↔↔	↑↑		↗	↑↑	↗	↗	↑↑↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00	1.00	0.91	
Frbp, ped/bikes	1.00	1.00	0.74	1.00	0.99		1.00	1.00	0.79	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3072	3167	1048	3072	3092		1583	3167	1113	1583	4407	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.09	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3072	3167	1048	3072	3092		153	3167	1113	168	4407	
Volume (vph)	127	1617	58	451	703	57	401	1814	439	12	1412	112
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	134	1702	61	475	740	60	422	1909	462	13	1486	118
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	73	0	7	0
Lane Group Flow (vph)	134	1702	61	475	795	0	422	1909	389	13	1597	0
Conf. Peds. (#/hr)	102		193	193		102	173		149	149		173
Conf. Bikes (#/hr)			6			6			9			5
Turn Type	Prot		pm+ov	Prot			pm+pt		pm+ov		pm+pt	
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases			2				8		8		4	
Actuated Green, G (s)	8.0	48.0	55.0	8.0	48.0		49.3	42.6	50.6	41.0	38.3	
Effective Green, g (s)	8.0	49.3	56.3	8.0	49.3		50.7	44.0	52.0	42.4	39.7	
Actuated g/C Ratio	0.07	0.41	0.47	0.07	0.41		0.42	0.37	0.43	0.35	0.33	
Clearance Time (s)	4.0	5.3	4.0	4.0	5.3		4.0	5.4	4.0	4.0	5.4	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	205	1301	527	205	1270		148	1161	519	91	1458	
v/s Ratio Prot	0.04	c0.54	0.01	c0.15	0.26		c0.17	0.60	0.05	0.00	0.36	
v/s Ratio Perm			0.05				c1.04		0.30	0.05		
v/c Ratio	0.65	1.31	0.12	2.32	0.63		2.85	1.64	0.75	0.14	1.10	
Uniform Delay, d1	54.6	35.4	17.9	56.0	28.0		29.6	38.0	28.5	31.9	40.1	
Progression Factor	0.87	0.79	0.66	1.05	0.72		1.20	1.13	1.82	1.00	1.00	
Incremental Delay, d2	0.7	139.2	0.0	603.6	1.7		834.8	290.3	0.6	0.7	54.0	
Delay (s)	48.4	167.2	11.8	662.4	21.8		870.5	333.1	52.6	32.6	94.2	
Level of Service	D	F	B	F	C		F	F	D	C	F	
Approach Delay (s)		153.8			260.4			367.9			93.7	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	237.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.07		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	137.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗		↘	↗↗	↘	↘	↗↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3167	1417	1583	3028		1583	3167	1417	1583	3116	
Flt Permitted	0.19	1.00	1.00	0.07	1.00		0.12	1.00	1.00	0.16	1.00	
Satd. Flow (perm)	320	3167	1417	123	3028		205	3167	1417	273	3116	
Volume (vph)	174	1495	139	117	616	254	192	982	234	208	986	117
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	185	1590	148	124	655	270	204	1045	249	221	1049	124
RTOR Reduction (vph)	0	0	33	0	34	0	0	0	4	0	8	0
Lane Group Flow (vph)	185	1590	115	124	891	0	204	1045	245	221	1165	0
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6		6	2			8		8		4	
Actuated Green, G (s)	52.1	52.1	52.1	52.1	52.1		56.5	56.5	56.5	56.5	56.5	
Effective Green, g (s)	54.0	54.0	54.0	54.0	54.0		58.0	58.0	58.0	58.0	58.0	
Actuated g/C Ratio	0.45	0.45	0.45	0.45	0.45		0.48	0.48	0.48	0.48	0.48	
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9		5.5	5.5	5.5	5.5	5.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	144	1425	638	55	1363		99	1531	685	132	1506	
v/s Ratio Prot		0.50			0.29			0.33			0.37	
v/s Ratio Perm	0.58		0.08	c1.00			c0.99		0.17	0.81		
v/c Ratio	1.28	1.12	0.18	2.25	0.65		2.06	0.68	0.36	1.67	0.77	
Uniform Delay, d1	33.0	33.0	19.8	33.0	25.7		31.0	23.9	19.4	31.0	25.6	
Progression Factor	1.11	1.11	1.25	0.79	0.79		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	133.0	53.2	0.1	569.8	0.2		510.3	2.5	1.5	334.2	3.9	
Delay (s)	169.5	89.9	24.8	595.9	20.5		541.3	26.4	20.8	365.2	29.5	
Level of Service	F	F	C	F	C		F	C	C	F	C	
Approach Delay (s)		92.6			88.5			95.6			82.7	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	90.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.15		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖	↖	↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3152		1583	3076		1583	1667	1417	1583	1635	
Flt Permitted	0.20	1.00		0.20	1.00		0.18	1.00	1.00	0.30	1.00	
Satd. Flow (perm)	327	3152		327	3076		293	1667	1417	503	1635	
Volume (vph)	102	1469	48	91	725	170	74	569	178	73	640	91
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	106	1530	50	95	755	177	77	593	185	76	667	95
RTOR Reduction (vph)	0	4	0	0	34	0	0	0	1	0	9	0
Lane Group Flow (vph)	106	1576	0	95	898	0	77	593	184	76	753	0
Turn Type	Perm			Perm			Perm			Perm	Perm	
Protected Phases	6			2			8			8	4	
Permitted Phases	6			2			8			8	4	
Actuated Green, G (s)	20.1	20.1		20.1	20.1		31.0	31.0	31.0	31.0	31.0	
Effective Green, g (s)	20.4	20.4		20.4	20.4		31.6	31.6	31.6	31.6	31.6	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.53	0.53	0.53	0.53	0.53	
Clearance Time (s)	4.3	4.3		4.3	4.3		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	1072		111	1046		154	878	746	265	861	
v/s Ratio Prot	c0.50			0.29			0.36			c0.46		
v/s Ratio Perm	0.32			0.29			0.26			0.15		
v/c Ratio	0.95	1.47		0.86	0.86		0.50	0.68	0.25	0.29	0.88	
Uniform Delay, d1	19.4	19.8		18.4	18.5		9.1	10.4	7.7	7.9	12.5	
Progression Factor	1.00	1.00		1.03	0.99		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	74.0	216.7		25.5	3.7		11.1	4.1	0.8	2.7	12.1	
Delay (s)	93.3	236.5		44.4	22.0		20.3	14.6	8.5	10.6	24.5	
Level of Service	F	F		D	C		C	B	A	B	C	
Approach Delay (s)	227.5			24.0			13.8			23.3		
Approach LOS	F			C			B			C		

Intersection Summary

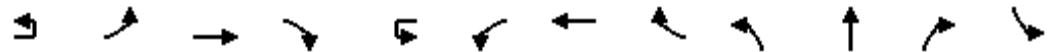
HCM Average Control Delay	99.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	120.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘		↗	↘			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1583	1662		1583	1660			1649			1618	
Flt Permitted	0.15	1.00		0.15	1.00			0.63			0.98	
Satd. Flow (perm)	256	1662		256	1660			1055			1594	
Volume (vph)	157	659	10	120	735	10	112	569	10	17	721	142
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	164	686	10	125	766	10	117	593	10	18	751	148
RTOR Reduction (vph)	0	1	0	0	1	0	0	1	0	0	11	0
Lane Group Flow (vph)	164	695	0	125	775	0	0	719	0	0	906	0
Conf. Peds. (#/hr)	66		13	13		66	21		26	26		21
Conf. Bikes (#/hr)			27			8						6
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			26.0			26.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			26.0			26.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.43			0.43	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	111	720		111	719			457			691	
v/s Ratio Prot		0.42			0.47							
v/s Ratio Perm	c0.64			0.49				c0.68			0.57	
v/c Ratio	1.48	0.97		1.13	1.08			1.57			1.31	
Uniform Delay, d1	17.0	16.6		17.0	17.0			17.0			17.0	
Progression Factor	1.00	1.00		1.03	1.04			2.13			1.00	
Incremental Delay, d2	256.8	26.0		88.6	44.7			266.9			150.0	
Delay (s)	273.8	42.6		106.1	62.3			303.0			167.0	
Level of Service	F	D		F	E			F			F	
Approach Delay (s)		86.7			68.4			303.0			167.0	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	149.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	161.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔	↔↔↔	↔		↔	↔↔↔	↔	↔	↔	↔	↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		1.00	0.91	1.00		1.00	0.91	1.00	1.00	1.00		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.97		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1583	4550	1417		1583	4550	1417	1583	1625		1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.11	1.00		0.22
Satd. Flow (perm)		1583	4550	1417		1583	4550	1417	190	1625		365
Volume (vph)	31	138	2018	45	14	77	2361	196	101	323	65	352
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	31	139	2038	45	14	78	2385	198	102	326	66	356
RTOR Reduction (vph)	0	0	0	18	0	0	0	74	0	6	0	0
Lane Group Flow (vph)	0	170	2038	27	0	92	2385	124	102	386	0	356
Turn Type	Prot	Prot		Perm	Prot	Prot		pm+ov	pm+pt			pm+pt
Protected Phases	1	1	6		5	5	2	7	3	8		7
Permitted Phases				6				2	8			4
Actuated Green, G (s)		16.5	43.8	43.8		12.2	39.5	51.5	42.9	33.0		47.1
Effective Green, g (s)		16.5	44.8	44.8		12.2	40.5	52.5	44.9	35.0		49.1
Actuated g/C Ratio		0.14	0.37	0.37		0.10	0.34	0.44	0.37	0.29		0.41
Clearance Time (s)		4.0	5.0	5.0		4.0	5.0	4.0	4.0	6.0		4.0
Vehicle Extension (s)		3.0	4.4	4.4		3.0	4.3	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		218	1699	529		161	1536	667	186	474		271
v/s Ratio Prot		c0.11	0.45			0.06	c0.52	0.02	0.05	0.24		c0.13
v/s Ratio Perm				0.02				0.07	0.16			c0.41
v/c Ratio		0.78	1.20	0.05		0.57	1.55	0.19	0.55	0.81		1.31
Uniform Delay, d1		50.0	37.6	24.0		51.4	39.8	20.7	29.2	39.5		31.6
Progression Factor		1.00	1.00	1.00		0.79	1.70	3.66	1.00	1.00		1.07
Incremental Delay, d2		16.1	95.8	0.2		0.4	249.0	0.0	3.3	10.3		143.6
Delay (s)		66.1	133.4	24.2		41.2	316.5	75.6	32.5	49.7		177.5
Level of Service		E	F	C		D	F	E	C	D		F
Approach Delay (s)			126.1				289.2			46.2		
Approach LOS			F				F			D		

Intersection Summary

HCM Average Control Delay	187.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	120.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



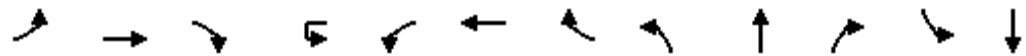
Movement	SBT	SBR
Lane Configurations	↱	
Ideal Flow (vphpl)	1700	1700
Total Lost time (s)	4.0	
Lane Util. Factor	1.00	
Frt	0.99	
Flt Protected	1.00	
Satd. Flow (prot)	1643	
Flt Permitted	1.00	
Satd. Flow (perm)	1643	
Volume (vph)	490	50
Peak-hour factor, PHF	0.99	0.99
Adj. Flow (vph)	495	51
RTOR Reduction (vph)	3	0
Lane Group Flow (vph)	543	0
Turn Type		
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	35.1	
Effective Green, g (s)	37.1	
Actuated g/C Ratio	0.31	
Clearance Time (s)	6.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	508	
v/s Ratio Prot	0.33	
v/s Ratio Perm		
v/c Ratio	1.07	
Uniform Delay, d1	41.5	
Progression Factor	1.05	
Incremental Delay, d2	35.5	
Delay (s)	79.1	
Level of Service	E	
Approach Delay (s)	117.9	
Approach LOS	F	
Intersection Summary		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	1662		1564	1648		1583	3042		1583	3003	
Flt Permitted	0.20	1.00		0.33	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	333	1662		545	1648		185	3042		185	3003	
Volume (vph)	363	501	7	296	638	36	143	1231	280	9	1155	309
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	370	511	7	302	651	37	146	1256	286	9	1179	315
RTOR Reduction (vph)	0	0	0	0	2	0	0	22	0	0	27	0
Lane Group Flow (vph)	370	518	0	302	686	0	146	1520	0	9	1467	0
Confl. Peds. (#/hr)	29		30	30		29	48		28	28		48
Confl. Bikes (#/hr)			26			9			4			2
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	45.0	45.0		45.0	45.0		35.1	35.1		35.1	35.1	
Effective Green, g (s)	46.0	46.0		46.0	46.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.40	0.40		0.40	0.40	
Clearance Time (s)	5.0	5.0		5.0	5.0		4.9	4.9		4.9	4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	170	849		279	842		74	1217		74	1201	
v/s Ratio Prot		0.31			0.42			0.50			0.49	
v/s Ratio Perm	c1.11			0.55			c0.79			0.05		
v/c Ratio	2.18	0.61		1.08	0.81		1.97	1.25		0.12	1.22	
Uniform Delay, d1	22.0	15.6		22.0	18.4		27.0	27.0		17.0	27.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	548.3	3.2		77.6	8.5		482.6	119.2		3.3	107.3	
Delay (s)	570.3	18.9		99.6	26.9		509.6	146.2		20.4	134.3	
Level of Service	F	B		F	C		F	F		C	F	
Approach Delay (s)		248.6			49.1			177.6			133.7	
Approach LOS		F			D			F			F	

Intersection Summary

HCM Average Control Delay	151.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.09		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	132.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗		↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1583	4550	1417		1583	4550	1417	1583	3167	1417	1583	3167
Flt Permitted	0.95	1.00	1.00		0.95	1.00	1.00	0.11	1.00	1.00	0.11	1.00
Satd. Flow (perm)	1583	4550	1417		1583	4550	1417	179	3167	1417	180	3167
Volume (vph)	230	1503	290	30	51	1799	254	174	1015	228	137	1195
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	245	1599	309	32	54	1914	270	185	1080	243	146	1271
RTOR Reduction (vph)	0	0	106	0	0	0	140	0	0	154	0	0
Lane Group Flow (vph)	245	1599	203	0	86	1914	130	185	1080	89	146	1271
Turn Type	Prot		pm+ov	Prot	Prot		Perm	pm+pt		Perm	pm+pt	
Protected Phases	1	6	3	5	5	2		3	8		7	4
Permitted Phases			6				2	8		8		4
Actuated Green, G (s)	18.8	36.2	45.2		9.5	26.9	26.9	44.0	35.0	35.0	43.6	34.8
Effective Green, g (s)	18.8	37.5	47.5		9.5	28.2	28.2	47.2	37.2	37.2	46.8	37.0
Actuated g/C Ratio	0.17	0.34	0.43		0.09	0.26	0.26	0.43	0.34	0.34	0.43	0.34
Clearance Time (s)	4.0	5.3	5.0		4.0	5.3	5.3	5.0	6.2	6.2	5.0	6.2
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	4.2	4.2	3.0	3.6
Lane Grp Cap (vph)	271	1551	663		137	1166	363	204	1071	479	202	1065
v/s Ratio Prot	0.15	c0.35	0.03		0.05	c0.42		c0.08	0.34		0.06	c0.40
v/s Ratio Perm			0.12				0.09	0.31		0.06	0.24	
v/c Ratio	0.90	1.03	0.31		0.63	1.64	0.36	0.91	1.01	0.19	0.72	1.19
Uniform Delay, d1	44.7	36.2	20.5		48.5	40.9	33.5	51.5	36.4	25.7	24.7	36.5
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	30.7	31.2	0.3		8.7	292.6	2.7	37.9	29.6	0.3	12.0	96.5
Delay (s)	75.4	67.4	20.7		57.2	333.5	36.2	89.4	66.0	26.0	36.7	133.0
Level of Service	E	E	C		E	F	D	F	E	C	D	F
Approach Delay (s)		61.6				287.7			62.4			111.9
Approach LOS		E				F			E			F

Intersection Summary

HCM Average Control Delay	140.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	7
Ideal Flow (vphpl)	1700
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1417
Flt Permitted	1.00
Satd. Flow (perm)	1417
Volume (vph)	152
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	162
RTOR Reduction (vph)	23
Lane Group Flow (vph)	139
Turn Type	pm+ov
Protected Phases	1
Permitted Phases	4
Actuated Green, G (s)	53.6
Effective Green, g (s)	55.8
Actuated g/C Ratio	0.51
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	719
v/s Ratio Prot	0.03
v/s Ratio Perm	0.07
v/c Ratio	0.19
Uniform Delay, d1	14.8
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	14.9
Level of Service	B
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑			↑↑↑	↔	↔	↔↔↔	↔			
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.91			0.86	1.00	0.86	0.81	0.86			
Frt	1.00	1.00			1.00	0.85	1.00	0.97	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3072	4550			5733	1417	1362	3900	1218			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3072	4550			5733	1417	1362	3900	1218			
Volume (vph)	725	1765	0	0	1492	631	790	950	747	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	780	1898	0	0	1604	678	849	1022	803	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	9	0	9	9	0	0	0
Lane Group Flow (vph)	780	1898	0	0	1604	669	540	1626	490	0	0	0
Turn Type	Prot						Perm	Split	Perm			
Protected Phases	1	6					2	4	4			
Permitted Phases							2			4		
Actuated Green, G (s)	25.0	70.0					41.0	41.0	39.2	39.2	39.2	
Effective Green, g (s)	25.0	71.0					42.0	42.0	41.0	41.0	41.0	
Actuated g/C Ratio	0.21	0.59					0.35	0.35	0.34	0.34	0.34	
Clearance Time (s)	4.0	5.0					5.0	5.0	5.8	5.8	5.8	
Vehicle Extension (s)	3.0	3.0					3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	640	2692					2007	496	465	1333	416	
v/s Ratio Prot	c0.25	0.42					0.28		0.40	c0.42		
v/s Ratio Perm								c0.47			0.40	
v/c Ratio	1.22	0.71					0.80	1.35	1.16	1.22	1.18	
Uniform Delay, d1	47.5	17.2					35.2	39.0	39.5	39.5	39.5	
Progression Factor	1.05	1.44					1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	107.2	1.0					3.4	169.8	94.1	105.8	102.2	
Delay (s)	156.9	25.6					38.6	208.8	133.6	145.3	141.7	
Level of Service	F	C					D	F	F	F	F	
Approach Delay (s)		63.8					89.2		142.3		0.0	
Approach LOS		E					F		F		A	

Intersection Summary

HCM Average Control Delay	98.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	110.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑		↔↔	↑↑↑					↔	↔↔	↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.81		0.97	0.91					0.91	0.86	0.91
Frt		0.98		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		6614		3072	4550					1441	2819	1289
Flt Permitted		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (perm)		6614		3072	4550					1441	2819	1289
Volume (vph)	0	1811	280	633	1818	0	0	0	0	500	391	273
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	1886	292	659	1894	0	0	0	0	521	407	284
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	0	0	0	14
Lane Group Flow (vph)	0	2156	0	659	1894	0	0	0	0	310	618	270
Turn Type				Prot						Split		Perm
Protected Phases		2		1	6					4	4	
Permitted Phases												4
Actuated Green, G (s)		43.4		29.8	77.7					32.6	32.6	32.6
Effective Green, g (s)		44.1		30.3	78.4					33.6	33.6	33.6
Actuated g/C Ratio		0.37		0.25	0.65					0.28	0.28	0.28
Clearance Time (s)		4.7		4.5	4.7					5.0	5.0	5.0
Vehicle Extension (s)		3.0		4.0	3.0					4.0	4.0	4.0
Lane Grp Cap (vph)		2431		776	2973					403	789	361
v/s Ratio Prot		c0.33		c0.21	0.42					0.22	c0.22	
v/s Ratio Perm												0.21
v/c Ratio		0.89		0.85	0.64					0.77	0.78	0.75
Uniform Delay, d1		35.6		42.7	12.4					39.6	39.8	39.4
Progression Factor		1.00		0.52	1.51					1.00	1.00	1.00
Incremental Delay, d2		5.3		4.0	0.4					9.1	5.4	8.8
Delay (s)		40.9		26.4	19.1					48.7	45.2	48.1
Level of Service		D		C	B					D	D	D
Approach Delay (s)		40.9			21.0			0.0			46.8	
Approach LOS		D			C			A			D	

Intersection Summary

HCM Average Control Delay	33.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	110.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	0.97		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	
Frt	1.00	0.95		1.00	1.00			0.95			0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.98			1.00	
Satd. Flow (prot)	1576	1541		1583	1664			1519			1631	
Flt Permitted	0.21	1.00		0.15	1.00			0.60			0.93	
Satd. Flow (perm)	342	1541		247	1664			932			1525	
Volume (vph)	14	603	273	380	590	5	418	120	291	30	296	32
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	15	641	290	404	628	5	445	128	310	32	315	34
RTOR Reduction (vph)	0	27	0	0	1	0	0	33	0	0	6	0
Lane Group Flow (vph)	15	904	0	404	632	0	0	850	0	0	375	0
Conf. Peds. (#/hr)	10		27	27		10	17		16	16		17
Conf. Bikes (#/hr)			30			16			3			10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	27.0	27.0		27.0	27.0			25.0			25.0	
Effective Green, g (s)	27.0	27.0		27.0	27.0			25.0			25.0	
Actuated g/C Ratio	0.45	0.45		0.45	0.45			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	154	693		111	749			388			635	
v/s Ratio Prot		0.59			0.38							
v/s Ratio Perm	0.04			c1.64				c0.91			0.25	
v/c Ratio	0.10	1.30		3.64	0.84			2.19			0.59	
Uniform Delay, d1	9.5	16.5		16.5	14.6			17.5			13.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.3	147.4		1209.8	11.2			544.6			1.5	
Delay (s)	10.7	163.9		1226.3	25.9			562.1			15.0	
Level of Service	B	F		F	C			F			B	
Approach Delay (s)		161.5			493.5			562.1			15.0	
Approach LOS		F			F			F			B	

Intersection Summary

HCM Average Control Delay	359.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.94		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	166.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4518		1583	4507		1583	1616		1583	1583	
Flt Permitted	0.08	1.00		0.08	1.00		0.11	1.00		0.44	1.00	
Satd. Flow (perm)	133	4518		130	4507		180	1616		737	1583	
Volume (vph)	87	1687	83	40	1643	110	43	196	50	87	382	192
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	91	1757	86	42	1711	115	45	204	52	91	398	200
RTOR Reduction (vph)	0	5	0	0	6	0	0	8	0	0	15	0
Lane Group Flow (vph)	91	1839	0	42	1820	0	45	248	0	91	583	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		2		2		4		4		4	
Permitted Phases	2		2		4		4		4		4	
Actuated Green, G (s)	74.6	74.6		74.6	74.6		36.0	36.0		36.0	36.0	
Effective Green, g (s)	75.0	75.0		75.0	75.0		37.0	37.0		37.0	37.0	
Actuated g/C Ratio	0.62	0.62		0.62	0.62		0.31	0.31		0.31	0.31	
Clearance Time (s)	4.4	4.4		4.4	4.4		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	83	2824		81	2817		56	498		227	488	
v/s Ratio Prot		0.41			0.40			0.15			c0.37	
v/s Ratio Perm	c0.68			0.32			0.25			0.12		
v/c Ratio	1.10	0.65		0.52	0.65		0.80	0.50		0.40	1.19	
Uniform Delay, d1	22.5	14.2		12.5	14.2		38.2	33.9		32.8	41.5	
Progression Factor	1.28	1.22		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	59.5	0.1		21.7	1.2		55.1	0.8		1.2	106.1	
Delay (s)	88.3	17.5		34.2	15.3		93.2	34.7		33.9	147.6	
Level of Service	F	B		C	B		F	C		C	F	
Approach Delay (s)		20.8			15.7			43.5			132.6	
Approach LOS		C			B			D			F	

Intersection Summary

HCM Average Control Delay	36.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	104.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑	↗	↖↗	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1583	4550	3167	1417	3072	1417
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1583	4550	3167	1417	3072	1417
Volume (vph)	361	1382	1345	726	828	364
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	380	1455	1416	764	872	383
RTOR Reduction (vph)	0	0	0	6	0	5
Lane Group Flow (vph)	380	1455	1416	758	872	378
Turn Type	Prot			pm+ov		pt+ov
Protected Phases	5	2	6	4	4	4 5
Permitted Phases				6		
Actuated Green, G (s)	12.5	40.6	37.1	66.5	29.4	45.5
Effective Green, g (s)	12.0	40.5	37.0	66.0	29.0	45.0
Actuated g/C Ratio	0.13	0.45	0.41	0.73	0.32	0.50
Clearance Time (s)	3.5	3.9	3.9	3.6	3.6	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	211	2048	1302	1102	990	709
v/s Ratio Prot	c0.24	c0.32	c0.45	0.22	c0.28	0.27
v/s Ratio Perm				0.31		
v/c Ratio	1.80	0.71	1.09	0.69	0.88	0.53
Uniform Delay, d1	39.0	20.0	26.5	6.5	28.9	15.3
Progression Factor	1.00	1.00	0.64	0.32	1.00	1.00
Incremental Delay, d2	378.7	2.1	40.9	0.2	9.3	0.8
Delay (s)	417.7	22.1	57.7	2.2	38.1	16.1
Level of Service	F	C	E	A	D	B
Approach Delay (s)		104.0	38.3		31.4	
Approach LOS		F	D		C	

Intersection Summary

HCM Average Control Delay	59.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Appendix C-5:
Future Year 2035 Alternative 3 Level of Service Worksheets
(Including Mitigation)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↑↑	↗		↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95	1.00		0.95	1.00
Frt	1.00	0.98		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		1.00	1.00
Satd. Flow (prot)	1583	4437		1583	4538			3143	1417		3153	1417
Flt Permitted	0.12	1.00		0.95	1.00			0.55	1.00		0.68	1.00
Satd. Flow (perm)	202	4437		1583	4538			1754	1417		2160	1417
Volume (vph)	82	1540	306	56	1722	30	136	764	122	85	884	561
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	86	1621	322	59	1813	32	143	804	128	89	931	591
RTOR Reduction (vph)	0	32	0	0	2	0	0	0	70	0	0	2
Lane Group Flow (vph)	86	1911	0	59	1843	0	0	947	58	0	1020	589
Turn Type	Perm		Prot		Perm		Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	6		5		2		8		8		4	
Permitted Phases	6						8		8		4	
Actuated Green, G (s)	33.0	33.0		4.0	41.0			40.5	40.5		40.5	40.5
Effective Green, g (s)	33.0	33.0		4.0	41.0			41.0	41.0		41.0	41.0
Actuated g/C Ratio	0.37	0.37		0.04	0.46			0.46	0.46		0.46	0.46
Clearance Time (s)	4.0	4.0		4.0	4.0			4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	74	1627		70	2067			799	646		984	646
v/s Ratio Prot	c0.43		0.04		c0.41							
v/s Ratio Perm	0.43						c0.54		0.04		0.47	
v/c Ratio	1.16	1.17		0.84	0.89			1.19	0.09		1.04	0.91
Uniform Delay, d1	28.5	28.5		42.7	22.5			24.5	13.9		24.5	22.8
Progression Factor	1.43	1.47		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	120.5	81.7		56.9	6.3			95.9	0.3		38.6	19.3
Delay (s)	161.3	123.6		99.6	28.8			120.4	14.2		63.1	42.1
Level of Service	F	F		F	C			F	B		E	D
Approach Delay (s)	125.2				31.0		107.7				55.4	
Approach LOS	F				C		F				E	

Intersection Summary

HCM Average Control Delay	78.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	117.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 2: 6th St & Western Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔↔			↔↔	↔↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0			4.0			4.0	4.0
Lane Util. Factor		0.95			0.95			0.95			0.95	1.00
Frbp, ped/bikes		1.00			0.98			1.00			1.00	0.83
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		0.99			0.99			0.99			1.00	0.85
Flt Protected		1.00			1.00			1.00			1.00	1.00
Satd. Flow (prot)		3127			3080			3134			3167	1171
Flt Permitted		1.00			1.00			1.00			1.00	1.00
Satd. Flow (perm)		3127			3080			3134			3167	1171
Volume (vph)	0	1058	60	0	1089	98	0	1377	52	0	1770	114
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	1069	61	0	1100	99	0	1391	53	0	1788	115
RTOR Reduction (vph)	0	2	0	0	5	0	0	3	0	0	0	14
Lane Group Flow (vph)	0	1128	0	0	1194	0	0	1441	0	0	1788	101
Conf. Peds. (#/hr)	76		47	47		76	70		83	83		70
Conf. Bikes (#/hr)			7			7			12			9
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)		40.2			40.2			40.2			40.2	40.2
Effective Green, g (s)		41.0			41.0			41.0			41.0	41.0
Actuated g/C Ratio		0.46			0.46			0.46			0.46	0.46
Clearance Time (s)		4.8			4.8			4.8			4.8	4.8
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1425			1403			1428			1443	533
v/s Ratio Prot		0.36			c0.39			0.46			c0.56	
v/s Ratio Perm												0.09
v/c Ratio		0.79			0.85			1.01			1.24	0.19
Uniform Delay, d1		20.9			21.8			24.5			24.5	14.6
Progression Factor		1.00			1.00			0.60			1.00	1.00
Incremental Delay, d2		4.6			6.7			9.5			113.7	0.8
Delay (s)		25.4			28.4			24.1			138.2	15.4
Level of Service		C			C			C			F	B
Approach Delay (s)		25.4			28.4			24.1			130.8	
Approach LOS		C			C			C			F	

Intersection Summary			
HCM Average Control Delay	61.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	109.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖↗		↖	↖↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4489		1583	4473		1583	3109		1583	3010	
Flt Permitted	0.14	1.00		0.14	1.00		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	228	4489		230	4473		230	3109		230	3010	
Volume (vph)	196	1373	54	134	1692	55	249	1094	43	181	1384	232
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	211	1476	58	144	1819	59	268	1176	46	195	1488	249
RTOR Reduction (vph)	0	5	0	0	4	0	0	3	0	0	15	0
Lane Group Flow (vph)	211	1529	0	144	1874	0	268	1219	0	195	1722	0
Conf. Peds. (#/hr)	529		124	124		529	153		349	349		153
Conf. Bikes (#/hr)			4			6			8			9
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	35.8	27.8		35.4	27.6		35.8	27.8		35.8	27.8	
Effective Green, g (s)	37.2	29.2		36.8	29.0		37.0	29.0		37.0	29.0	
Actuated g/C Ratio	0.41	0.32		0.41	0.32		0.41	0.32		0.41	0.32	
Clearance Time (s)	4.0	5.4		4.0	5.4		4.0	5.2		4.0	5.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	215	1456		211	1441		215	1002		215	970	
v/s Ratio Prot	c0.09	0.34		0.06	c0.42		c0.11	0.39		0.08	c0.57	
v/s Ratio Perm	0.32			0.22			0.40			0.29		
v/c Ratio	0.98	1.05		0.68	1.30		1.25	1.22		0.91	1.78	
Uniform Delay, d1	22.9	30.4		20.8	30.5		43.2	30.5		42.6	30.5	
Progression Factor	1.89	0.94		0.96	0.85		1.15	1.17		1.60	1.45	
Incremental Delay, d2	31.6	29.6		3.6	137.3		123.2	100.4		5.5	349.3	
Delay (s)	74.7	58.1		23.6	163.2		172.7	136.1		73.7	393.4	
Level of Service	E	E		C	F		F	F		E	F	
Approach Delay (s)		60.1			153.2			142.7			361.1	
Approach LOS		E			F			F			F	

Intersection Summary

HCM Average Control Delay	184.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	131.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Fr _t	1.00	0.98		1.00	0.97		1.00	1.00		1.00	1.00	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3113		1583	3071		1583	3158		1583	3157	
Fl _t Permitted	0.31	1.00		0.27	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	519	3113		452	3071		159	3158		159	3157	
Volume (vph)	57	599	76	64	482	121	43	1317	25	137	1552	33
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	64	673	85	72	542	136	48	1480	28	154	1744	37
RTOR Reduction (vph)	0	3	0	0	8	0	0	2	0	0	2	0
Lane Group Flow (vph)	64	755	0	72	670	0	48	1506	0	154	1779	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	8			4			6			2		
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	39.4	39.4		39.4	39.4		41.3	41.3		41.3	41.3	
Effective Green, g (s)	40.0	40.0		40.0	40.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio	0.44	0.44		0.44	0.44		0.47	0.47		0.47	0.47	
Clearance Time (s)	4.6	4.6		4.6	4.6		4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	231	1384		201	1365		74	1474		74	1473	
v/s Ratio Prot	c0.24			0.22			0.48			0.56		
v/s Ratio Perm	0.12			0.16			0.30			c0.97		
v/c Ratio	0.28	0.55		0.36	0.49		0.65	1.02		2.08	1.21	
Uniform Delay, d ₁	15.8	18.3		16.5	17.8		18.4	24.0		24.0	24.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.67	0.69	
Incremental Delay, d ₂	3.0	1.5		4.9	1.3		36.5	29.2		490.7	94.2	
Delay (s)	18.8	19.9		21.4	19.0		54.8	53.2		506.8	110.9	
Level of Service	B			C			D			F		
Approach Delay (s)	19.8			19.3			53.2			142.4		
Approach LOS	B			B			D			F		

Intersection Summary

HCM Average Control Delay	76.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕↕↕		↗	↕↕↕		↗	↕↕	↗	↗	↕↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4517		1583	4499		1583	3167	1417	1583	3167	1417
Flt Permitted	0.11	1.00		0.11	1.00		0.12	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	184	4517		192	4499		196	3167	1417	188	3167	1417
Volume (vph)	72	1917	97	46	1755	142	101	1125	47	110	1394	141
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	74	1976	100	47	1809	146	104	1160	48	113	1437	145
RTOR Reduction (vph)	0	5	0	0	9	0	0	0	29	0	0	41
Lane Group Flow (vph)	74	2071	0	47	1946	0	104	1160	19	113	1437	104
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases	6			2			8		8	4		4
Actuated Green, G (s)	42.7	35.3		39.7	33.8		39.5	33.1	39.0	42.1	34.4	41.8
Effective Green, g (s)	43.7	36.3		40.7	34.8		40.5	34.1	40.0	43.1	35.4	42.8
Actuated g/C Ratio	0.44	0.36		0.41	0.35		0.40	0.34	0.40	0.43	0.35	0.43
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	184	1640		160	1566		168	1080	623	188	1121	663
v/s Ratio Prot	c0.03	c0.46		0.02	0.43		0.04	0.37	0.00	c0.05	c0.45	0.01
v/s Ratio Perm	0.15			0.10			0.21		0.01	0.21		0.06
v/c Ratio	0.40	1.26		0.29	1.24		0.62	1.07	0.03	0.60	1.28	0.16
Uniform Delay, d1	23.2	31.9		24.2	32.6		24.8	33.0	18.2	22.7	32.3	17.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	123.3		1.0	114.8		6.6	49.6	0.0	5.3	133.8	0.1
Delay (s)	24.7	155.1		25.2	147.4		31.4	82.5	18.2	28.0	166.1	17.7
Level of Service	C	F		C	F		C	F	B	C	F	B
Approach Delay (s)		150.7			144.5			76.1			144.2	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	133.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	110.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4515		1583	4515		1583	3134		1583	3080	
Flt Permitted	0.09	1.00		0.09	1.00		0.10	1.00		0.11	1.00	
Satd. Flow (perm)	155	4515		155	4515		171	3134		177	3080	
Volume (vph)	198	1808	98	151	2062	113	117	1025	75	85	1294	290
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	208	1903	103	159	2171	119	123	1079	79	89	1362	305
RTOR Reduction (vph)	0	6	0	0	7	0	0	2	0	0	1	0
Lane Group Flow (vph)	208	2000	0	159	2283	0	123	1156	0	89	1666	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	6			2			8			4		
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	42.5	42.5		42.5	42.5		38.5	38.5		38.5	38.5	
Effective Green, g (s)	43.0	43.0		43.0	43.0		39.0	39.0		39.0	39.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.43	0.43		0.43	0.43	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	2157		74	2157		74	1358		77	1335	
v/s Ratio Prot		0.44			0.51			0.37			0.54	
v/s Ratio Perm	c1.34			1.03			c0.72			0.50		
v/c Ratio	2.81	0.93		2.15	1.06		1.66	0.85		1.16	1.25	
Uniform Delay, d1	23.5	22.0		23.5	23.5		25.5	22.9		25.5	25.5	
Progression Factor	1.42	1.45		1.15	1.15		1.00	1.00		1.00	1.00	
Incremental Delay, d2	836.2	5.3		521.0	27.6		350.0	6.9		150.8	117.9	
Delay (s)	869.5	37.2		547.9	54.6		375.5	29.8		176.3	143.4	
Level of Service	F	D		F	D		F	C		F	F	
Approach Delay (s)		115.4			86.6			63.0			145.1	
Approach LOS		F			F			E			F	

Intersection Summary

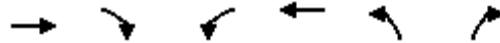
HCM Average Control Delay	104.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.26		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	131.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↑	↗		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	0.99			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		1.00	
Satd. Flow (prot)	1583	4535		1583	4526			1638	1417		1583	
Flt Permitted	0.07	1.00		0.07	1.00			0.62	1.00		0.98	
Satd. Flow (perm)	111	4535		111	4526			1029	1417		1548	
Volume (vph)	32	1920	42	98	2390	87	66	123	127	13	130	78
Peak-hour factor, PHF	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Adj. Flow (vph)	41	2430	53	124	3025	110	84	156	161	16	165	99
RTOR Reduction (vph)	0	2	0	0	3	0	0	0	2	0	1	0
Lane Group Flow (vph)	41	2481	0	124	3132	0	0	240	159	0	279	0
Turn Type	Perm			Perm			Perm			Perm	Perm	
Protected Phases	6			2			8			8		4
Permitted Phases	6			2			8			8		4
Actuated Green, G (s)	60.2	60.2		60.2	60.2			21.3	21.3		21.3	
Effective Green, g (s)	60.2	60.2		60.2	60.2			21.8	21.8		21.8	
Actuated g/C Ratio	0.67	0.67		0.67	0.67			0.24	0.24		0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.5	4.5		4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	74	3033		74	3027			249	343		375	
v/s Ratio Prot		0.55			0.69							
v/s Ratio Perm	0.37			c1.12				c0.23	0.11		0.18	
v/c Ratio	0.55	0.82		1.68	1.03			0.96	0.46		0.74	
Uniform Delay, d1	7.8	10.9		14.9	14.9			33.7	29.1		31.5	
Progression Factor	1.00	1.00		1.14	1.16			1.00	1.00		1.00	
Incremental Delay, d2	26.7	2.6		328.7	21.3			46.6	1.0		7.8	
Delay (s)	34.5	13.5		345.7	38.6			80.4	30.1		39.3	
Level of Service	C	B		F	D			F	C		D	
Approach Delay (s)		13.8			50.3			60.2			39.3	
Approach LOS		B			D			E			D	

Intersection Summary

























HCM Average Control Delay	36.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵↵↵	↵
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.91
Frbp, ped/bikes	0.98		1.00	1.00	0.96	0.89
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	0.96	0.85
Flt Protected	1.00		0.95	1.00	0.96	1.00
Satd. Flow (prot)	4350		1583	4550	2867	1147
Flt Permitted	1.00		0.09	1.00	0.96	1.00
Satd. Flow (perm)	4350		148	4550	2867	1147
Volume (vph)	1424	236	591	1808	646	614
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1483	246	616	1883	673	640
RTOR Reduction (vph)	25	0	0	0	39	2
Lane Group Flow (vph)	1704	0	616	1883	861	411
Conf. Peds. (#/hr)		154	154			100
Conf. Bikes (#/hr)						2
Turn Type			pm+pt		pm+ov	
Protected Phases	6		5	2	4	5
Permitted Phases			2			4
Actuated Green, G (s)	40.0		52.0	52.0	28.3	36.3
Effective Green, g (s)	41.0		53.0	53.0	29.0	37.0
Actuated g/C Ratio	0.46		0.59	0.59	0.32	0.41
Clearance Time (s)	5.0		4.0	5.0	4.7	4.0
Vehicle Extension (s)	3.0		2.0	3.0	2.0	2.0
Lane Grp Cap (vph)	1982		215	2679	924	523
v/s Ratio Prot	0.39		c0.26	0.41	c0.30	0.07
v/s Ratio Perm			c1.43			0.29
v/c Ratio	0.86		2.87	0.70	0.93	0.79
Uniform Delay, d1	21.9		23.7	13.0	29.5	23.0
Progression Factor	1.00		1.00	1.00	0.43	0.27
Incremental Delay, d2	5.1		852.0	1.6	12.9	5.6
Delay (s)	27.1		875.7	14.5	25.4	11.8
Level of Service	C		F	B	C	B
Approach Delay (s)	27.1			226.8	21.2	
Approach LOS	C			F	C	

Intersection Summary

HCM Average Control Delay	115.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	113.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3111		1583	1667	1417	1583	3110		1583	3163	
Flt Permitted	0.40	1.00		0.45	1.00	1.00	0.31	1.00		0.14	1.00	
Satd. Flow (perm)	663	3111		744	1667	1417	509	3110		236	3163	
Volume (vph)	7	326	43	217	285	105	136	1110	151	26	764	7
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	7	340	45	226	297	109	142	1156	157	27	796	7
RTOR Reduction (vph)	0	0	0	0	0	62	0	12	0	0	1	0
Lane Group Flow (vph)	7	385	0	226	297	47	142	1301	0	27	802	0
Turn Type	Perm			Perm			Perm	Perm		Perm		
Protected Phases	8			4			6			2		
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	26.4	26.4		26.4	26.4	26.4	54.3	54.3		54.3	54.3	
Effective Green, g (s)	27.0	27.0		27.0	27.0	27.0	55.0	55.0		55.0	55.0	
Actuated g/C Ratio	0.30	0.30		0.30	0.30	0.30	0.61	0.61		0.61	0.61	
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	199	933		223	500	425	311	1901		144	1933	
v/s Ratio Prot		0.12			0.18			c0.42				0.25
v/s Ratio Perm	0.01			c0.30		0.03	0.28			0.11		
v/c Ratio	0.04	0.41		1.01	0.59	0.11	0.46	0.68		0.19	0.42	
Uniform Delay, d1	22.3	25.2		31.5	26.8	22.8	9.4	11.7		7.7	9.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.66	1.87		0.22	0.31	
Incremental Delay, d2	0.3	1.3		63.8	5.1	0.5	0.4	0.2		0.3	0.1	
Delay (s)	22.6	26.5		95.3	32.0	23.3	16.1	22.0		1.9	2.9	
Level of Service	C	C		F	C	C	B	C		A	A	
Approach Delay (s)		26.4			53.1			21.5			2.9	
Approach LOS		C			D			C			A	
Intersection Summary												
HCM Average Control Delay			23.4			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.79									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			86.4%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗		↗	↗↗		↗	↗↗	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4488		1583	4535		1583	3146		1583	3167	1417
Flt Permitted	0.15	1.00		0.95	1.00		0.13	1.00		0.15	1.00	1.00
Satd. Flow (perm)	248	4488		1583	4535		222	3146		256	3167	1417
Volume (vph)	71	1660	165	140	2674	58	177	1261	58	57	1090	145
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	78	1824	181	154	2938	64	195	1386	64	63	1198	159
RTOR Reduction (vph)	0	13	0	0	3	0	0	3	0	0	0	111
Lane Group Flow (vph)	78	1992	0	154	2999	0	195	1447	0	63	1198	48
Turn Type	pm+pt		Prot		pm+pt		pm+pt		pm+pt		Perm	
Protected Phases	5	2		1	6		7	4		3	8	8
Permitted Phases	2					4				8		8
Actuated Green, G (s)	31.3	26.0		11.1	30.9		39.5	29.5		31.0	25.0	25.0
Effective Green, g (s)	32.6	26.9		10.6	31.8		40.5	30.5		32.0	26.0	26.0
Actuated g/C Ratio	0.36	0.30		0.12	0.35		0.45	0.34		0.36	0.29	0.29
Clearance Time (s)	4.4	4.9		3.5	4.9		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	174	1341		186	1602		259	1066		179	915	409
v/s Ratio Prot	0.03	0.44		c0.10	c0.66		c0.09	c0.46		0.02	0.38	
v/s Ratio Perm	0.13					0.25				0.10		0.03
v/c Ratio	0.45	1.49		0.83	1.87		0.75	1.36		0.35	1.31	0.12
Uniform Delay, d1	23.3	31.6		38.8	29.1		40.0	29.8		40.8	32.0	23.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.81	0.77	0.42
Incremental Delay, d2	1.8	222.6		25.1	394.9		11.7	166.9		1.1	146.5	0.5
Delay (s)	25.1	254.2		63.9	424.0		51.7	196.6		34.4	171.2	10.5
Level of Service	C			E			D			C		B
Approach Delay (s)	245.6			406.5			179.5			147.1		
Approach LOS	F			F			F			F		

Intersection Summary

HCM Average Control Delay	276.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	122.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↑	↗		↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.99	1.00
Satd. Flow (prot)	1583	4524		1583	4538			1627	1417		1650	1417
Flt Permitted	0.09	1.00		0.09	1.00			0.98	1.00		0.99	1.00
Satd. Flow (perm)	146	4524		146	4538			1627	1417		1650	1417
Volume (vph)	22	1618	64	46	2215	40	142	147	20	34	137	10
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	1668	66	47	2284	41	146	152	21	35	141	10
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	16	0	0	9
Lane Group Flow (vph)	23	1734	0	47	2323	0	0	298	5	0	176	1
Turn Type	Perm		Perm		Split		Perm		Split		Perm	
Protected Phases	6		2		4		4		3		3	
Permitted Phases	6		2				4				3	
Actuated Green, G (s)	43.7	43.7		43.7	43.7			19.0	19.0		10.4	10.4
Effective Green, g (s)	45.6	45.6		45.6	45.6			20.5	20.5		11.9	11.9
Actuated g/C Ratio	0.51	0.51		0.51	0.51			0.23	0.23		0.13	0.13
Clearance Time (s)	5.9	5.9		5.9	5.9			5.5	5.5		5.5	5.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	74	2292		74	2299			371	323		218	187
v/s Ratio Prot		0.38			c0.51			c0.18			c0.11	
v/s Ratio Perm	0.16			0.32				0.00				0.00
v/c Ratio	0.31	0.76		0.64	1.01			0.80	0.01		0.81	0.01
Uniform Delay, d1	13.0	17.8		16.1	22.2			32.8	26.9		37.9	33.9
Progression Factor	0.70	0.57		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	7.3	1.6		34.9	21.4			11.9	0.0		19.3	0.0
Delay (s)	16.3	11.7		51.1	43.6			44.7	26.9		57.2	33.9
Level of Service	B	B		D	D			D	C		E	C
Approach Delay (s)		11.7			43.7			43.5			55.9	
Approach LOS		B			D			D			E	

Intersection Summary

HCM Average Control Delay	32.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.98			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.96	1.00
Satd. Flow (prot)	1583	4536		1583	4478			1631			1607	1417
Flt Permitted	0.10	1.00		0.11	1.00			0.99			0.96	1.00
Satd. Flow (perm)	162	4536		184	4478			1631			1607	1417
Volume (vph)	91	1354	28	19	2014	238	43	146	17	317	113	332
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	93	1382	29	19	2055	243	44	149	17	323	115	339
RTOR Reduction (vph)	0	2	0	0	16	0	0	4	0	0	0	97
Lane Group Flow (vph)	93	1409	0	19	2282	0	0	206	0	0	438	242
Turn Type	Perm		Perm		Split		Split		Split		Perm	
Protected Phases	6		2		3		3		4		4	
Permitted Phases	6		2								4	
Actuated Green, G (s)	39.6	39.6		39.6	39.6			9.6			24.9	24.9
Effective Green, g (s)	41.1	41.1		41.1	41.1			11.0			25.9	25.9
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.12			0.29	0.29
Clearance Time (s)	5.5	5.5		5.5	5.5			5.4			5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	74	2071		84	2045			199			462	408
v/s Ratio Prot		0.31			0.51			c0.13			c0.27	
v/s Ratio Perm	c0.57			0.10								0.17
v/c Ratio	1.26	0.68		0.23	1.12			1.04			0.95	0.59
Uniform Delay, d1	24.4	19.3		14.8	24.4			39.5			31.4	27.5
Progression Factor	1.00	1.00		1.39	1.16			1.00			1.00	1.00
Incremental Delay, d2	188.5	1.8		1.5	54.0			74.0			28.8	2.3
Delay (s)	213.0	21.1		22.1	82.4			113.5			60.2	29.8
Level of Service	F	C		C	F			F			E	C
Approach Delay (s)		33.0			81.9			113.5			46.9	
Approach LOS		C			F			F			D	

Intersection Summary

HCM Average Control Delay	62.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: Wilshire Blvd & Sycamore Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑↑↑		↑	↑↑↑			↑			↑		
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0		
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00		
Frbp, ped/bikes		0.99		1.00	1.00			0.99			0.99		
Flpb, ped/bikes		1.00		0.99	1.00			1.00			1.00		
Frt		0.99		1.00	1.00			0.95			0.96		
Flt Protected		1.00		0.95	1.00			0.98			1.00		
Satd. Flow (prot)		4231		1477	4265			1434			1483		
Flt Permitted		1.00		0.14	1.00			0.73			0.98		
Satd. Flow (perm)		4231		219	4265			1068			1460		
Volume (vph)	0	1372	66	52	2013	37	48	21	44	9	94	51	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	0	1460	70	55	2141	39	51	22	47	10	100	54	
RTOR Reduction (vph)	0	4	0	0	1	0	0	25	0	0	5	0	
Lane Group Flow (vph)	0	1526	0	55	2179	0	0	95	0	0	159	0	
Confl. Peds. (#/hr)	25		36	36		25	8		5	5		8	
Confl. Bikes (#/hr)			5			4							
Turn Type				Perm			Perm				Perm		
Protected Phases		6			2			8				4	
Permitted Phases				2			8			4			
Actuated Green, G (s)		66.6		66.6	66.6			15.9			15.9		
Effective Green, g (s)		66.1		66.1	66.1			15.9			15.9		
Actuated g/C Ratio		0.73		0.73	0.73			0.18			0.18		
Clearance Time (s)		3.5		3.5	3.5			4.0			4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0		
Lane Grp Cap (vph)		3107		161	3132			189			258		
v/s Ratio Prot		0.36			c0.51								
v/s Ratio Perm				0.25				0.09			c0.11		
v/c Ratio		0.49		0.34	0.70			0.50			0.62		
Uniform Delay, d1		5.0		4.2	6.5			33.5			34.2		
Progression Factor		0.35		1.00	1.00			1.00			1.00		
Incremental Delay, d2		0.1		5.7	1.3			2.1			4.3		
Delay (s)		1.8		9.9	7.8			35.6			38.6		
Level of Service		A		A	A			D			D		
Approach Delay (s)		1.8			7.8			35.6			38.6		
Approach LOS		A			A			D			D		
Intersection Summary													
HCM Average Control Delay			7.6									HCM Level of Service	A
HCM Volume to Capacity ratio			0.68										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			79.4%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗		↖	↗		↖	↗	↘
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2980	1333	1490	2971		1490	4264		1490	4216	
Flt Permitted	0.13	1.00	1.00	0.12	1.00		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	202	2980	1333	193	2971		216	4264		213	4216	
Volume (vph)	55	1018	93	169	1647	36	90	1672	50	121	2227	257
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	1072	98	178	1734	38	95	1760	53	127	2344	271
RTOR Reduction (vph)	0	0	19	0	2	0	0	3	0	0	15	0
Lane Group Flow (vph)	58	1072	79	178	1770	0	95	1810	0	127	2600	0
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases	8		8	4			6			2		
Actuated Green, G (s)	35.5	30.0	36.5	38.5	31.5		34.5	28.0		35.5	28.5	
Effective Green, g (s)	36.5	31.0	37.5	39.5	32.5		35.5	29.0		36.5	29.5	
Actuated g/C Ratio	0.41	0.34	0.42	0.44	0.36		0.39	0.32		0.41	0.33	
Clearance Time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	4.8	3.0	3.0	4.6		3.0	4.3		3.0	5.5	
Lane Grp Cap (vph)	161	1026	615	186	1073		177	1374		186	1382	
v/s Ratio Prot	0.02	0.36	0.01	c0.07	c0.60		0.04	0.42		c0.05	c0.62	
v/s Ratio Perm	0.12		0.05	0.35			0.17			0.22		
v/c Ratio	0.36	1.04	0.13	0.96	1.65		0.54	1.32		0.68	1.88	
Uniform Delay, d1	41.3	29.5	16.2	20.4	28.8		41.4	30.5		41.8	30.2	
Progression Factor	0.50	0.75	0.57	1.00	1.00		1.54	0.36		1.75	1.50	
Incremental Delay, d2	0.9	35.6	0.1	53.0	296.5		0.3	143.2		0.9	396.7	
Delay (s)	21.4	57.6	9.3	73.4	325.3		64.1	154.2		74.3	441.9	
Level of Service	C	E	A	E	F		E	F		E	F	
Approach Delay (s)		52.1			302.3			149.7			424.9	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	268.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	136.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑	↗	↙	↑↑		↙	↑↑↗		↙	↑↑↗	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2980	1333	1490	2971		1490	4253		1490	4280	
Flt Permitted	0.11	1.00	1.00	0.10	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	179	2980	1333	161	2971		161	4253		161	4280	
Volume (vph)	27	1072	155	144	1520	32	84	1924	93	94	2272	10
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	28	1094	158	147	1551	33	86	1963	95	96	2318	10
RTOR Reduction (vph)	0	0	10	0	1	0	0	6	0	0	1	0
Lane Group Flow (vph)	28	1094	148	147	1583	0	86	2052	0	96	2327	0
Turn Type	Perm		Perm	pm+pt		Perm		Perm		Perm		
Protected Phases		8		7	4			6			2	
Permitted Phases	8		8	4		6				2		
Actuated Green, G (s)	34.0	34.0	34.0	42.0	42.0	38.0	38.0			38.0	38.0	
Effective Green, g (s)	35.0	35.0	35.0	43.0	43.0	39.0	39.0			39.0	39.0	
Actuated g/C Ratio	0.39	0.39	0.39	0.48	0.48	0.43	0.43			0.43	0.43	
Clearance Time (s)	5.0	5.0	5.0	3.0	5.0	5.0	5.0			5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	
Lane Grp Cap (vph)	70	1159	518	136	1419	70	1843			70	1855	
v/s Ratio Prot		0.37		0.05	c0.53		0.48				0.54	
v/s Ratio Perm	0.16		0.11	0.47		0.53				c0.60		
v/c Ratio	0.40	0.94	0.29	1.08	1.12	1.23	1.11			1.37	1.25	
Uniform Delay, d1	19.9	26.6	18.9	21.7	23.5	25.5	25.5			25.5	25.5	
Progression Factor	0.86	0.91	0.79	1.00	1.00	1.00	1.00			2.03	2.01	
Incremental Delay, d2	10.8	11.7	0.9	100.5	62.2	181.3	59.4			175.3	115.0	
Delay (s)	27.8	35.9	15.9	122.1	85.7	206.8	84.9			227.0	166.2	
Level of Service	C	D	B	F	F	F	F			F	F	
Approach Delay (s)		33.3			88.8		89.7				168.6	
Approach LOS		C			F		F				F	

Intersection Summary

HCM Average Control Delay	105.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	133.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↗	↕↕↕		↗	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.91		1.00	0.91	
Frt		0.99			0.99		1.00	1.00		1.00	0.99	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2942			2942		1490	4276		1490	4242	
Flt Permitted		1.00			1.00		0.19	1.00		0.19	1.00	
Satd. Flow (perm)		2942			2942		300	4276		300	4242	
Volume (vph)	0	737	69	0	1210	115	59	1953	20	171	2208	148
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	744	70	0	1222	116	60	1973	20	173	2230	149
RTOR Reduction (vph)	0	0	0	0	0	0	0	2	0	0	12	0
Lane Group Flow (vph)	0	814	0	0	1338	0	60	1991	0	173	2367	0
Turn Type		Perm		Perm		Perm		Perm		Perm		
Protected Phases		8		4		4		6		6		2
Permitted Phases		8		4		4		6		6		2
Actuated Green, G (s)		30.2		30.2		20.2		20.2		20.2		20.2
Effective Green, g (s)		31.1		31.1		20.9		20.9		20.9		20.9
Actuated g/C Ratio		0.52		0.52		0.35		0.35		0.35		0.35
Clearance Time (s)		4.9		4.9		4.7		4.7		4.7		4.7
Vehicle Extension (s)		3.0		3.0		3.0		3.0		3.0		3.0
Lane Grp Cap (vph)		1525		1525		105		1489		105		1478
v/s Ratio Prot		0.28		c0.45				0.47				0.56
v/s Ratio Perm						0.20				c0.58		
v/c Ratio		0.53		0.88		0.57		1.34		1.65		1.60
Uniform Delay, d1		9.6		12.8		15.9		19.6		19.6		19.6
Progression Factor		1.00		1.00		1.00		1.00		1.00		1.00
Incremental Delay, d2		0.4		6.0		20.6		156.4		330.0		274.0
Delay (s)		10.0		18.8		36.6		175.9		349.5		293.5
Level of Service		A		B		D		F		F		F
Approach Delay (s)		10.0		18.8				171.9				297.3
Approach LOS		A		B				F				F

Intersection Summary

HCM Average Control Delay	169.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	117.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑↑		↗	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	4116		1489	4241		1490	4230		1490	4158	
Flt Permitted	0.14	1.00		0.13	1.00		0.13	1.00		0.95	1.00	
Satd. Flow (perm)	216	4116		206	4241		202	4230		1490	4158	
Volume (vph)	96	1205	182	143	1851	69	141	1789	102	249	1737	219
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	97	1217	184	144	1870	70	142	1807	103	252	1755	221
RTOR Reduction (vph)	0	22	0	0	4	0	0	7	0	0	18	0
Lane Group Flow (vph)	97	1379	0	144	1936	0	142	1903	0	252	1958	0
Conf. Peds. (#/hr)	96		120	120		96	89		58	58		89
Conf. Bikes (#/hr)			8			5			3			4
Turn Type	pm+pt			pm+pt			pm+pt			Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8					
Actuated Green, G (s)	35.0	29.0		38.0	30.5		38.5	31.0		7.5	31.0	
Effective Green, g (s)	34.5	29.0		37.5	30.5		38.0	31.0		7.0	31.0	
Actuated g/C Ratio	0.38	0.32		0.42	0.34		0.42	0.34		0.08	0.34	
Clearance Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	161	1326		186	1437		185	1457		116	1432	
v/s Ratio Prot	0.04	0.33		c0.06	c0.46		0.06	0.45		c0.17	c0.47	
v/s Ratio Perm	0.19			0.26			0.26					
v/c Ratio	0.60	1.04		0.77	1.35		0.77	1.31		2.17	1.37	
Uniform Delay, d1	42.4	30.5		20.3	29.8		42.3	29.5		41.5	29.5	
Progression Factor	1.41	0.72		1.39	0.81		1.80	0.88		1.00	1.00	
Incremental Delay, d2	5.9	34.9		13.3	159.7		10.4	140.6		554.9	169.9	
Delay (s)	65.8	56.9		41.5	183.9		86.5	166.6		596.4	199.4	
Level of Service	E	E		D	F		F	F		F	F	
Approach Delay (s)		57.5			174.0			161.1			244.3	
Approach LOS		E			F			F			F	

Intersection Summary

HCM Average Control Delay	168.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	124.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕↕		↕	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.94			0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1452			1512		1490	4271		1490	4267	
Flt Permitted		0.94			0.89		0.08	1.00		0.08	1.00	
Satd. Flow (perm)		1369			1368		118	4271		118	4267	
Volume (vph)	19	59	58	82	201	48	78	1953	27	9	2039	41
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	20	61	60	85	207	49	80	2013	28	9	2102	42
RTOR Reduction (vph)	0	1	0	0	1	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	140	0	0	340	0	80	2040	0	9	2142	0
Conf. Peds. (#/hr)	6		10	10		6	21		10	10		5
Conf. Bikes (#/hr)			2			2			2			
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		27.7			27.7		52.8	52.8		52.8	52.8	
Effective Green, g (s)		28.7			28.7		53.3	53.3		53.3	53.3	
Actuated g/C Ratio		0.32			0.32		0.59	0.59		0.59	0.59	
Clearance Time (s)		5.0			5.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		437			436		70	2529		70	2527	
v/s Ratio Prot								0.48			0.50	
v/s Ratio Perm		0.10			c0.25		c0.68			0.08		
v/c Ratio		0.32			0.78		1.14	0.81		0.13	0.85	
Uniform Delay, d1		23.2			27.8		18.4	14.3		8.1	15.0	
Progression Factor		1.00			1.00		1.00	1.00		0.47	0.77	
Incremental Delay, d2		0.4			8.5		151.5	2.9		0.3	0.4	
Delay (s)		23.7			36.3		169.9	17.2		4.2	12.0	
Level of Service		C			D		F	B		A	B	
Approach Delay (s)		23.7			36.3			23.0			11.9	
Approach LOS		C			D			C			B	
Intersection Summary												
HCM Average Control Delay			18.9				HCM Level of Service			B		
HCM Volume to Capacity ratio			1.02									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			94.4%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑↑		↖	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	4256		1490	4251		1490	4271		1490	4217	
Flt Permitted	0.12	1.00		0.11	1.00		0.95	1.00		0.13	1.00	
Satd. Flow (perm)	186	4256		166	4251		1490	4271		197	4217	
Volume (vph)	117	1379	59	95	1720	89	105	1878	33	147	1970	225
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	124	1467	63	101	1830	95	112	1998	35	156	2096	239
RTOR Reduction (vph)	0	4	0	0	5	0	0	2	0	0	14	0
Lane Group Flow (vph)	124	1526	0	101	1920	0	112	2031	0	156	2321	0
Turn Type	Perm		pm+pt			Prot			pm+pt			
Protected Phases	8		7			5			1			
Permitted Phases	8		4			2			6			
Actuated Green, G (s)	32.4	32.4	44.5		44.5	11.2	30.2		42.0	30.5		
Effective Green, g (s)	33.8	33.8	45.9		45.9	11.2	31.6		43.4	31.9		
Actuated g/C Ratio	0.33	0.33	0.45		0.45	0.11	0.31		0.43	0.32		
Clearance Time (s)	5.4	5.4	4.0		5.4	4.0	5.4		4.0	5.4		
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0		4.0	3.0		
Lane Grp Cap (vph)	62	1424	182		1932	165	1336		232	1332		
v/s Ratio Prot	0.36		0.04		c0.45	0.08			c0.08		c0.55	
v/s Ratio Perm	c0.67		0.21			0.48			0.21			
v/c Ratio	2.00	1.07	0.55		0.99	0.68	1.52		0.67	1.74		
Uniform Delay, d1	33.6	33.6	21.3		27.4	43.2	34.7		44.3	34.5		
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2	502.0	45.6	3.6		19.0	10.6	237.9		8.1	337.4		
Delay (s)	535.6	79.2	24.9		46.4	53.7	272.6		52.4	371.9		
Level of Service	F		C			D			F		D	
Approach Delay (s)	113.4		45.3			261.2			351.9			
Approach LOS	F		D			F			F			

Intersection Summary

HCM Average Control Delay	206.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.58		
Actuated Cycle Length (s)	101.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	121.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↙	↑↑↑			↑↑↑			↑	↗		↕		
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0		4.0		
Lane Util. Factor	1.00	0.91			0.91			1.00	1.00		1.00		
Frbp, ped/bikes	1.00	1.00			0.99			1.00	0.97		0.98		
Flpb, ped/bikes	0.99	1.00			1.00			1.00	1.00		0.99		
Frt	1.00	1.00			0.99			1.00	0.85		0.95		
Flt Protected	0.95	1.00			1.00			0.99	1.00		0.98		
Satd. Flow (prot)	1477	4245			4205			1556	1287		1418		
Flt Permitted	0.06	1.00			1.00			0.96	1.00		0.82		
Satd. Flow (perm)	99	4245			4205			1501	1287		1191		
Volume (vph)	87	1173	35	0	2053	71	11	77	36	84	31	75	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	90	1209	36	0	2116	73	11	79	37	87	32	77	
RTOR Reduction (vph)	0	2	0	0	3	0	0	0	29	0	2	0	
Lane Group Flow (vph)	90	1243	0	0	2186	0	0	90	8	0	194	0	
Conf. Peds. (#/hr)	151		56	56		151	25		19	19		25	
Conf. Bikes (#/hr)			4			7			1			1	
Turn Type	Perm			Perm			Perm		Perm		Perm		
Protected Phases	6			2			8		8		4		
Permitted Phases	6						8		8		4		
Actuated Green, G (s)	63.3	63.3			63.3			19.2	19.2		19.2		
Effective Green, g (s)	62.8	62.8			62.8			19.2	19.2		19.2		
Actuated g/C Ratio	0.70	0.70			0.70			0.21	0.21		0.21		
Clearance Time (s)	3.5	3.5			3.5			4.0	4.0		4.0		
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)	69	2962			2934			320	275		254		
v/s Ratio Prot		0.29			0.52								
v/s Ratio Perm	c0.91						0.06		0.01		c0.16		
v/c Ratio	1.30	0.42			0.75			0.28	0.03		0.76		
Uniform Delay, d1	13.6	5.8			8.6			29.6	28.0		33.3		
Progression Factor	1.45	1.14			0.91			1.00	1.00		1.00		
Incremental Delay, d2	192.8	0.3			0.2			0.5	0.0		12.7		
Delay (s)	212.5	6.9			8.0			30.1	28.1		45.9		
Level of Service	F	A			A			C	C		D		
Approach Delay (s)		20.8			8.0			29.5			45.9		
Approach LOS		C			A			C			D		
Intersection Summary													
HCM Average Control Delay			15.1									HCM Level of Service	B
HCM Volume to Capacity ratio			1.18										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			88.2%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕	↗	↖	↕	↗		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.86	0.86		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.94			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.99	
Satd. Flow (prot)	1583	4543		1583	4300	1218		1560			1563	
Flt Permitted	0.08	1.00		0.13	1.00	1.00		0.92			0.70	
Satd. Flow (perm)	139	4543		215	4300	1218		1439			1099	
Volume (vph)	44	1220	12	64	1804	133	26	176	166	131	249	240
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	51	1402	14	74	2074	153	30	202	191	151	286	276
RTOR Reduction (vph)	0	1	0	0	0	71	0	19	0	0	3	0
Lane Group Flow (vph)	51	1415	0	74	2074	82	0	404	0	0	710	0
Turn Type	Perm			Perm			Perm	Perm			Perm	
Protected Phases	6			2			2	8			4	
Permitted Phases	6			2			2	8			4	
Actuated Green, G (s)	48.0	48.0		48.0	48.0	48.0		34.0			34.0	
Effective Green, g (s)	48.0	48.0		48.0	48.0	48.0		34.0			34.0	
Actuated g/C Ratio	0.53	0.53		0.53	0.53	0.53		0.38			0.38	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	74	2423		115	2293	650		544			415	
v/s Ratio Prot	0.31			c0.48								
v/s Ratio Perm	0.37			0.34		0.07		0.28			c0.65	
v/c Ratio	0.69	0.58		0.64	0.90	0.13		0.74			1.71	
Uniform Delay, d1	15.5	14.2		14.9	18.9	10.5		24.2			28.0	
Progression Factor	1.70	1.81		0.83	0.91	1.04		1.00			1.00	
Incremental Delay, d2	39.4	1.0		17.5	4.6	0.3		5.4			329.9	
Delay (s)	65.7	26.7		29.9	21.9	11.2		29.6			357.9	
Level of Service	E	C		C	C	B		C			F	
Approach Delay (s)	28.1			21.4				29.6			357.9	
Approach LOS	C			C				C			F	

Intersection Summary

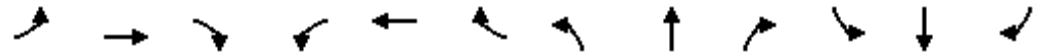
HCM Average Control Delay	73.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	124.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	1.00		1.00	1.00	0.90	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	4538		1583	4550	1483	
Flt Permitted	1.00		0.17	1.00	0.99	
Satd. Flow (perm)	4538		291	4550	1483	
Volume (vph)	1194	21	106	2169	10	28
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1257	22	112	2283	11	29
RTOR Reduction (vph)	2	0	0	0	20	0
Lane Group Flow (vph)	1277	0	112	2283	20	0
Turn Type			Perm			
Protected Phases	6			2	8	
Permitted Phases			2			
Actuated Green, G (s)	54.8		54.8	54.8	26.0	
Effective Green, g (s)	55.3		55.3	55.3	26.7	
Actuated g/C Ratio	0.61		0.61	0.61	0.30	
Clearance Time (s)	4.5		4.5	4.5	4.7	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2788		179	2796	440	
v/s Ratio Prot	0.28			c0.50	c0.01	
v/s Ratio Perm			0.39			
v/c Ratio	0.46		0.63	0.82	0.04	
Uniform Delay, d1	9.3		10.9	13.4	22.6	
Progression Factor	1.00		1.22	1.33	1.00	
Incremental Delay, d2	0.5		4.1	0.7	0.0	
Delay (s)	9.9		17.4	18.6	22.6	
Level of Service	A		B	B	C	
Approach Delay (s)	9.9			18.5	22.6	
Approach LOS	A			B	C	

Intersection Summary

HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↘	↘	↑↑	↘	↘	↑↑	↘	↘	↑↑	↘
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	3167	1417	1583	3167	1417	1583	3167	1417	1583	3130	3130
Flt Permitted	0.12	1.00	1.00	0.11	1.00	1.00	0.14	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	208	3167	1417	188	3167	1417	238	3167	1417	208	3130	3130
Volume (vph)	87	935	103	198	1575	121	84	947	109	103	1448	120
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	89	954	105	202	1607	123	86	966	111	105	1478	122
RTOR Reduction (vph)	0	0	26	0	0	7	0	0	76	0	7	0
Lane Group Flow (vph)	89	954	79	202	1607	116	86	966	35	105	1593	0
Turn Type	Perm		Perm	pm+pt		pm+ov	Perm		Perm	pm+pt		
Protected Phases		6		5		2	7		8		7	4
Permitted Phases	6		6	2		2	8		8		4	
Actuated Green, G (s)	31.0	31.0	31.0	43.0	43.0	48.7	28.1	28.1	28.1	37.0	37.0	37.0
Effective Green, g (s)	32.0	32.0	32.0	44.0	44.0	50.0	28.0	28.0	28.0	38.0	38.0	38.0
Actuated g/C Ratio	0.36	0.36	0.36	0.49	0.49	0.56	0.31	0.31	0.31	0.42	0.42	0.42
Clearance Time (s)	5.0	5.0	5.0	3.2	5.0	4.3	3.9	3.9	3.9	4.3	4.3	5.0
Vehicle Extension (s)	4.7	4.7	4.7	3.0	4.2	3.0	4.3	4.3	4.3	3.0	4.5	4.5
Lane Grp Cap (vph)	74	1126	504	216	1548	850	74	985	441	179	1322	1322
v/s Ratio Prot		0.30		0.08	c0.51	0.01		0.31		0.04	c0.51	
v/s Ratio Perm	c0.43		0.06	0.37		0.07	0.36		0.02	0.21		
v/c Ratio	1.20	0.85	0.16	0.94	1.04	0.14	1.16	0.98	0.08	0.59	1.21	1.21
Uniform Delay, d1	29.0	26.7	19.8	19.6	23.0	9.6	31.0	30.7	21.9	19.8	26.0	26.0
Progression Factor	1.00	1.00	1.00	2.09	0.31	0.35	0.51	0.49	0.14	0.65	0.44	0.44
Incremental Delay, d2	169.1	7.9	0.7	7.6	19.6	0.0	86.2	5.2	0.0	0.4	93.0	93.0
Delay (s)	198.1	34.7	20.5	48.5	26.7	3.4	101.9	20.4	3.0	13.3	104.5	104.5
Level of Service	F	C	C	D	C	A	F	C	A	B	F	F
Approach Delay (s)		46.1			27.5			24.8			98.9	
Approach LOS		D			C			C			F	

Intersection Summary			
HCM Average Control Delay	51.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	127.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗	↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Fr _t	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Fl _t Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3139		1583	3167	1417	1583	3116		1583	3138	
Fl _t Permitted	0.11	1.00		0.24	1.00	1.00	0.14	1.00		0.12	1.00	
Satd. Flow (perm)	190	3139		403	3167	1417	230	3116		202	3138	
Volume (vph)	104	644	40	140	1603	181	74	1020	121	210	1419	93
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	116	716	44	156	1781	201	82	1133	134	233	1577	103
RTOR Reduction (vph)	0	5	0	0	0	28	0	10	0	0	5	0
Lane Group Flow (vph)	116	755	0	156	1781	173	82	1257	0	233	1675	0
Turn Type	pm+pt			pm+pt		pm+ov	Perm			pm+pt		
Protected Phases	1	6		5	2	7		8		7	4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	38.9	33.1		38.9	33.1	38.9	27.1	27.1		36.1	36.1	
Effective Green, g (s)	40.0	35.0		40.0	35.0	40.0	29.0	29.0		38.0	38.0	
Actuated g/C Ratio	0.44	0.39		0.44	0.39	0.44	0.32	0.32		0.42	0.42	
Clearance Time (s)	3.2	5.9		3.2	5.9	3.2	5.9	5.9		3.2	5.9	
Vehicle Extension (s)	3.0	4.6		3.0	4.7	3.0	4.7	4.7		3.0	4.7	
Lane Grp Cap (vph)	162	1221		245	1232	693	74	1004		162	1325	
v/s Ratio Prot	c0.04	0.24		0.04	c0.56	0.01		0.40		0.08	c0.53	
v/s Ratio Perm	0.28			0.25		0.11	0.36			c0.53		
v/c Ratio	0.72	0.62		0.64	1.45	0.25	1.11	1.25		1.44	1.26	
Uniform Delay, d ₁	43.3	22.1		17.2	27.5	15.6	30.5	30.5		44.7	26.0	
Progression Factor	1.00	1.00		0.61	0.81	0.73	1.47	1.48		0.93	0.51	
Incremental Delay, d ₂	14.0	2.4		2.6	202.8	0.1	134.3	121.2		200.5	119.4	
Delay (s)	57.3	24.5		13.0	225.1	11.5	179.0	166.3		242.1	132.6	
Level of Service	E	C		B	F	B	F	F		F	F	
Approach Delay (s)		28.8			189.5			167.1			145.9	
Approach LOS		C			F			F			F	

Intersection Summary

HCM Average Control Delay	149.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	124.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖↗	↖	↗	↖	↖↗	↗	↖	↖↗	↖↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.94	1.00	1.00	0.91	1.00	0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.98	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1549	1615		3072	1667	1337	1583	3167	1287	1554	3100	
Flt Permitted	0.45	1.00		0.95	1.00	1.00	0.09	1.00	1.00	0.25	1.00	
Satd. Flow (perm)	733	1615		3072	1667	1337	142	3167	1287	406	3100	
Volume (vph)	26	260	57	355	457	106	10	844	80	61	1348	103
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	27	271	59	370	476	110	10	879	83	64	1404	107
RTOR Reduction (vph)	0	8	0	0	0	59	0	0	0	0	6	0
Lane Group Flow (vph)	27	322	0	370	476	51	10	879	83	64	1505	0
Conf. Peds. (#/hr)	28		6	6		28	43		36	36		43
Conf. Bikes (#/hr)			4			1			5			7
Turn Type	Perm			Prot		Perm	Perm		pm+ov		Perm	
Protected Phases		8		7	4			6	7			2
Permitted Phases	8					4	6		6		2	
Actuated Green, G (s)	20.2	20.2		10.0	34.2	34.2	46.2	46.2	56.2	46.2	46.2	
Effective Green, g (s)	21.0	21.0		10.0	35.0	35.0	47.0	47.0	57.0	47.0	47.0	
Actuated g/C Ratio	0.23	0.23		0.11	0.39	0.39	0.52	0.52	0.63	0.52	0.52	
Clearance Time (s)	4.8	4.8		4.0	4.8	4.8	4.8	4.8	4.0	4.8	4.8	
Vehicle Extension (s)	5.9	5.9		3.0	5.2	5.2	4.8	4.8	3.0	4.4	4.4	
Lane Grp Cap (vph)	171	377		341	648	520	74	1654	872	212	1619	
v/s Ratio Prot		c0.20		c0.12	0.29			0.28	0.01		c0.49	
v/s Ratio Perm	0.04					0.04	0.07		0.05	0.16		
v/c Ratio	0.16	0.85		1.09	0.73	0.10	0.14	0.53	0.10	0.30	0.93	
Uniform Delay, d1	27.5	33.0		40.0	23.5	17.5	11.1	14.2	6.4	12.2	20.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.27	0.24	0.21	0.22	0.42	
Incremental Delay, d2	2.0	21.0		73.4	7.2	0.4	0.3	0.1	0.0	0.3	1.3	
Delay (s)	29.4	54.0		113.4	30.8	17.8	3.4	3.5	1.4	3.0	9.6	
Level of Service	C	D		F	C	B	A	A	A	A	A	
Approach Delay (s)		52.2			61.3			3.3			9.3	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕		↖	↕↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.98		1.00	1.00	0.83
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4475		1579	4496		1583	3068		1583	3167	1177
Flt Permitted	0.14	1.00		0.14	1.00		0.13	1.00		0.95	1.00	1.00
Satd. Flow (perm)	237	4475		237	4496		222	3068		1583	3167	1177
Volume (vph)	130	993	51	103	1883	49	215	1155	77	164	1627	258
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	138	1056	54	110	2003	52	229	1229	82	174	1731	274
RTOR Reduction (vph)	0	6	0	0	3	0	0	5	0	0	0	121
Lane Group Flow (vph)	138	1104	0	110	2052	0	229	1306	0	174	1731	153
Conf. Peds. (#/hr)	227		147	147		227	146		185	185		146
Conf. Bikes (#/hr)			2			6			8			6
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8					4
Actuated Green, G (s)	33.9	27.1		33.7	27.0		35.8	29.0		10.8	33.0	33.0
Effective Green, g (s)	34.1	28.1		33.9	28.0		36.0	30.0		10.0	34.0	34.0
Actuated g/C Ratio	0.38	0.31		0.38	0.31		0.40	0.33		0.11	0.38	0.38
Clearance Time (s)	3.2	5.0		3.2	5.0		3.2	5.0		3.2	5.0	5.0
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	180	1397		177	1399		180	1023		176	1196	445
v/s Ratio Prot	c0.05	0.25		0.04	c0.46		c0.09	0.43		0.11	c0.55	
v/s Ratio Perm	0.24			0.19			0.42					0.13
v/c Ratio	0.77	0.79		0.62	1.47		1.27	1.28		0.99	1.45	0.34
Uniform Delay, d1	42.9	28.3		20.2	31.0		44.2	30.0		39.9	28.0	20.0
Progression Factor	1.17	1.16		1.00	1.00		1.53	0.87		0.83	1.29	2.04
Incremental Delay, d2	13.6	3.5		6.6	214.1		151.8	130.4		47.3	204.0	1.2
Delay (s)	64.0	36.3		26.8	245.1		219.4	156.6		80.5	240.1	42.1
Level of Service	E	D		C	F		F	F		F	F	D
Approach Delay (s)		39.4			234.0			165.9			202.4	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	175.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	127.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗	↖	↔	↗		↕		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)			4.0	4.0	4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor			1.00	0.95	0.91	0.95		0.95		1.00	0.95	
Frbp, ped/bikes			0.98	1.00	0.99	0.97		0.99		1.00	1.00	
Flpb, ped/bikes			1.00	1.00	1.00	1.00		1.00		1.00	1.00	
Frt			0.86	1.00	0.93	0.85		0.98		1.00	1.00	
Flt Protected			1.00	0.95	0.97	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1412	1502	1359	1303		3074		1583	3167	
Flt Permitted			1.00	0.95	0.97	1.00		1.00		0.12	1.00	
Satd. Flow (perm)			1412	1502	1359	1303		3074		197	3167	
Volume (vph)	0	0	17	197	0	216	0	1169	176	122	1252	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	18	207	0	227	0	1231	185	128	1318	0
RTOR Reduction (vph)	0	0	17	0	31	127	0	11	0	0	0	0
Lane Group Flow (vph)	0	0	1	124	116	36	0	1405	0	128	1318	0
Conf. Peds. (#/hr)	11		1	1		11	8		23	23		8
Conf. Bikes (#/hr)						5			5			1
Turn Type			custom	Perm		Perm				Perm		
Protected Phases					3			2			2	
Permitted Phases			4	3		3				2		
Actuated Green, G (s)			2.2	18.9	18.9	18.9		54.5		54.5	54.5	
Effective Green, g (s)			3.1	19.8	19.8	19.8		55.1		55.1	55.1	
Actuated g/C Ratio			0.03	0.22	0.22	0.22		0.61		0.61	0.61	
Clearance Time (s)			4.9	4.9	4.9	4.9		4.6		4.6	4.6	
Vehicle Extension (s)			3.0	3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)			49	330	299	287		1882		121	1939	
v/s Ratio Prot								0.46			0.42	
v/s Ratio Perm			c0.00	0.08	0.09	0.03				c0.65		
v/c Ratio			0.01	0.38	0.39	0.12		0.75		1.06	0.68	
Uniform Delay, d1			42.0	29.8	29.9	28.2		12.5		17.4	11.6	
Progression Factor			1.00	1.00	1.00	1.00		1.00		1.49	0.90	
Incremental Delay, d2			0.1	0.7	0.8	0.2		2.7		41.4	0.2	
Delay (s)			42.1	30.6	30.8	28.3		15.2		67.4	10.6	
Level of Service			D	C	C	C		B		E	B	
Approach Delay (s)		42.1			29.8			15.2			15.7	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM Average Control Delay			17.5								HCM Level of Service	B
HCM Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			90.0								Sum of lost time (s)	12.0
Intersection Capacity Utilization			76.5%								ICU Level of Service	D
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑		↘	↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	
Lane Util. Factor		0.91			0.91		1.00	0.86			0.86	
Frt		0.99			0.96		1.00	1.00			1.00	
Flt Protected		1.00			1.00		0.95	1.00			1.00	
Satd. Flow (prot)		4493			4366		1583	5733			5733	
Flt Permitted		1.00			1.00		0.17	1.00			1.00	
Satd. Flow (perm)		4493			4366		284	5733			5733	
Volume (vph)	0	1408	129	0	1812	666	188	1442	0	0	1421	0
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	1422	130	0	1830	673	190	1457	0	0	1435	0
RTOR Reduction (vph)	0	11	0	0	66	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1541	0	0	2437	0	190	1457	0	0	1435	0
Turn Type							Perm					
Protected Phases		6			6			2			2	
Permitted Phases							2					
Actuated Green, G (s)		22.1			22.1		24.5	24.5			24.5	
Effective Green, g (s)		23.0			23.0		23.5	23.5			23.5	
Actuated g/C Ratio		0.23			0.23		0.24	0.24			0.24	
Clearance Time (s)		4.9			4.9		3.0	3.0			3.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		1033			1004		67	1347			1347	
v/s Ratio Prot		0.34			c0.56			0.25			0.25	
v/s Ratio Perm							c0.67					
v/c Ratio		1.49			2.43		2.84	1.08			1.07	
Uniform Delay, d1		38.5			38.5		38.2	38.2			38.2	
Progression Factor		0.70			1.00		1.00	1.00			0.60	
Incremental Delay, d2		221.9			645.2		865.7	49.8			31.2	
Delay (s)		248.7			683.7		904.0	88.1			54.3	
Level of Service		F			F		F	F			D	
Approach Delay (s)		248.7			683.7			182.2			54.3	
Approach LOS		F			F			F			D	
Intersection Summary												
HCM Average Control Delay			346.8				HCM Level of Service				F	
HCM Volume to Capacity ratio			2.64									
Actuated Cycle Length (s)			100.0				Sum of lost time (s)			53.5		
Intersection Capacity Utilization			100.4%				ICU Level of Service			G		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗		↑↑↑	↗		↑↗		↘	↑↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.86	1.00		0.91	1.00		0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85		1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1583	5733	1417		4550	1417		3166		1583	3139	
Flt Permitted	0.17	1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)	284	5733	1417		4550	1417		3166		1583	3139	
Volume (vph)	100	1123	40	0	1803	339	0	914	2	253	1195	75
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	103	1158	41	0	1859	349	0	942	2	261	1232	77
RTOR Reduction (vph)	0	0	31	0	0	203	0	0	0	0	5	0
Lane Group Flow (vph)	103	1158	10	0	1859	146	0	944	0	261	1304	0
Turn Type	Perm		Perm		Perm				Prot			
Protected Phases	2		2		2		8		7		4	
Permitted Phases	2		2		2							
Actuated Green, G (s)	24.5	24.5	24.5		24.5	24.5		31.0		5.0	31.0	
Effective Green, g (s)	23.5	23.5	23.5		23.5	23.5		32.5		5.0	32.5	
Actuated g/C Ratio	0.24	0.24	0.24		0.24	0.24		0.32		0.05	0.32	
Clearance Time (s)	3.0	3.0	3.0		3.0	3.0		5.5		4.0	5.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		5.0		3.0	4.0	
Lane Grp Cap (vph)	67	1347	333		1069	333		1029		79	1020	
v/s Ratio Prot		0.20			c0.41			0.30		c0.16	c0.42	
v/s Ratio Perm	0.36		0.01			0.10						
v/c Ratio	1.54	0.86	0.03		1.74	0.44		0.92		3.30	1.28	
Uniform Delay, d1	38.2	36.7	29.5		38.2	32.6		32.5		47.5	33.8	
Progression Factor	1.00	1.00	1.00		0.96	1.27		0.20		1.00	1.00	
Incremental Delay, d2	303.1	7.3	0.2		332.9	0.4		7.6		1068.4	133.0	
Delay (s)	341.4	44.0	29.6		369.8	41.8		14.0		1115.9	166.8	
Level of Service	F	D	C		F	D		B		F	F	
Approach Delay (s)		67.1			318.0			14.0			324.6	
Approach LOS		E			F			B			F	

Intersection Summary

HCM Average Control Delay	217.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	39.0
Intersection Capacity Utilization	104.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↗		↖	↕↕↗		↖	↕↕			↕↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95			0.95	
Frt	1.00	1.00		1.00	1.00		1.00	1.00			0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1583	4541		1583	4549		1583	3165			3039	
Flt Permitted	0.17	1.00		0.17	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	290	4541		290	4549		1583	3165			3039	
Volume (vph)	31	1516	20	43	1782	2	55	887	4	0	867	319
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	32	1547	20	44	1818	2	56	905	4	0	885	326
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	0	38	0
Lane Group Flow (vph)	32	1565	0	44	1820	0	56	909	0	0	1173	0
Turn Type	Perm		Perm		Prot							
Protected Phases	6		6		3		8				4	
Permitted Phases	6		6									
Actuated Green, G (s)	22.1	22.1		22.1	22.1		5.0	31.0			31.0	
Effective Green, g (s)	23.0	23.0		23.0	23.0		5.0	32.5			32.5	
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.05	0.32			0.32	
Clearance Time (s)	4.9	4.9		4.9	4.9		4.0	5.5			5.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	5.0			4.0	
Lane Grp Cap (vph)	67	1044		67	1046		79	1029			988	
v/s Ratio Prot		0.34			c0.40		c0.04	0.29			c0.39	
v/s Ratio Perm	0.11			0.15								
v/c Ratio	0.48	1.50		0.66	1.74		0.71	0.88			1.19	
Uniform Delay, d1	33.3	38.5		34.9	38.5		46.8	32.0			33.8	
Progression Factor	1.00	1.00		0.71	0.69		1.00	1.00			0.29	
Incremental Delay, d2	22.4	229.8		4.5	333.3		25.1	11.0			85.4	
Delay (s)	55.7	268.3		29.2	360.0		71.9	42.9			95.0	
Level of Service	E	F		C	F		E	D			F	
Approach Delay (s)		264.1			352.2			44.6			95.0	
Approach LOS		F			F			D			F	

Intersection Summary

HCM Average Control Delay	219.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	39.5
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖	↖	↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Fr _t	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	3122		1583	3149		1583	3167	1417	1583	3167	1417
Fl _t Permitted	0.13	1.00		0.13	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	222	3122		222	3149		1583	3167	1417	1583	3167	1417
Volume (vph)	70	894	93	117	1518	59	148	927	142	43	876	138
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	72	922	96	121	1565	61	153	956	146	44	903	142
RTOR Reduction (vph)	0	9	0	0	3	0	0	0	77	0	0	27
Lane Group Flow (vph)	72	1009	0	121	1623	0	153	956	69	44	903	115
Turn Type	Perm			Perm			Prot		Perm	Prot		Perm
Protected Phases	6			2			3	8		7		4
Permitted Phases	6			2					8			4
Actuated Green, G (s)	29.0	29.0		29.0	29.0		10.0	41.6	41.6	5.4	37.0	37.0
Effective Green, g (s)	30.0	30.0		30.0	30.0		10.0	42.6	42.6	5.4	38.0	38.0
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.11	0.47	0.47	0.06	0.42	0.42
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	74	1041		74	1050		176	1499	671	95	1337	598
v/s Ratio Prot		0.32			0.52		c0.10	c0.30		0.03	0.29	
v/s Ratio Perm	0.32			c0.54					0.05			0.08
v/c Ratio	0.97	0.97		1.64	1.55		0.87	0.64	0.10	0.46	0.68	0.19
Uniform Delay, d ₁	29.6	29.6		30.0	30.0		39.4	17.9	13.1	40.9	21.0	16.3
Progression Factor	0.52	0.52		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d ₂	25.5	3.9		338.7	250.2		33.6	2.1	0.3	3.5	2.7	0.7
Delay (s)	40.9	19.3		368.7	280.2		73.0	20.0	13.4	44.4	23.8	17.1
Level of Service	D	B		F	F		E	B	B	D	C	B
Approach Delay (s)		20.7			286.3			25.7			23.7	
Approach LOS		C			F			C			C	

Intersection Summary

HCM Average Control Delay	112.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	106.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↑↑			↖	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95			0.95	
Frt	1.00	0.99		1.00	1.00			0.96			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1583	4503		1583	4545			3051			3083	
Flt Permitted	0.09	1.00		0.15	1.00			1.00			0.67	
Satd. Flow (perm)	152	4503		256	4545			3051			2078	
Volume (vph)	65	1086	81	251	2009	16	0	520	167	124	960	181
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	70	1168	87	270	2160	17	0	559	180	133	1032	195
RTOR Reduction (vph)	0	9	0	0	1	0	0	25	0	0	1	0
Lane Group Flow (vph)	70	1246	0	270	2176	0	0	714	0	0	1359	0
Turn Type	Perm		Perm				Perm					
Protected Phases	6		2				8				4	
Permitted Phases	6		2								4	
Actuated Green, G (s)	42.3	42.3		42.3	42.3			36.0			36.0	
Effective Green, g (s)	44.0	44.0		44.0	44.0			38.0			38.0	
Actuated g/C Ratio	0.49	0.49		0.49	0.49			0.42			0.42	
Clearance Time (s)	5.7	5.7		5.7	5.7			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	74	2201		125	2222			1288			877	
v/s Ratio Prot		0.28			0.48			0.23				
v/s Ratio Perm	0.46			c1.05							c0.65	
v/c Ratio	0.95	0.57		2.16	0.98			0.55			1.55	
Uniform Delay, d1	21.9	16.3		23.0	22.6			19.6			26.0	
Progression Factor	0.43	0.47		0.63	0.52			1.00			1.00	
Incremental Delay, d2	50.5	0.4		524.4	2.7			0.5			252.9	
Delay (s)	59.9	8.1		538.8	14.5			20.1			278.9	
Level of Service	E	A		F	B			C			F	
Approach Delay (s)		10.8			72.4			20.1			278.9	
Approach LOS		B			E			C			F	

Intersection Summary			
HCM Average Control Delay	99.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	127.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑↑		↖	↑↑↑	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4488		1583	4478		1583	4481		1583	4550	1417
Flt Permitted	0.13	1.00		0.13	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	215	4488		215	4478		1583	4481		1583	4550	1417
Volume (vph)	53	1171	117	112	1639	193	487	1271	142	267	1121	186
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	57	1259	126	120	1762	208	524	1367	153	287	1205	200
RTOR Reduction (vph)	0	13	0	0	16	0	0	15	0	0	0	3
Lane Group Flow (vph)	57	1372	0	120	1954	0	524	1505	0	287	1205	197
Turn Type	Perm			Perm			Prot			Prot		Perm
Protected Phases	4			8			5			1		6
Permitted Phases	4			8			2					6
Actuated Green, G (s)	29.0	29.0		29.0	29.0		14.0	31.0		15.0	31.0	31.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		15.0	32.0		15.0	32.0	32.0
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.17	0.36		0.17	0.36	0.36
Clearance Time (s)	6.0	6.0		6.0	6.0		5.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	4.0	4.0		4.0	4.0		2.0	4.0		2.0	4.0	4.0
Lane Grp Cap (vph)	74	1546		74	1542		264	1593		264	1618	504
v/s Ratio Prot		0.31			0.44		c0.33			0.18	0.26	
v/s Ratio Perm	0.27			c0.56			c0.34					0.14
v/c Ratio	0.77	0.89		1.62	1.27		1.98	0.94		1.09	0.74	0.39
Uniform Delay, d1	26.3	27.9		29.5	29.5		37.5	28.1		37.5	25.4	21.7
Progression Factor	1.00	1.00		0.43	0.40		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	53.7	7.9		285.3	120.6		456.5	12.7		80.6	3.2	2.3
Delay (s)	80.0	35.8		297.9	132.5		494.0	40.9		118.1	28.6	24.0
Level of Service	F	D		F	F		F	D		F	C	C
Approach Delay (s)		37.5			142.0			157.0			43.2	
Approach LOS		D			F			F			D	

Intersection Summary

HCM Average Control Delay	102.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	116.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	0.96
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	1.00
Satd. Flow (prot)	1579	4530		1564	4520			1592			1657	1364
Flt Permitted	0.06	1.00		0.16	1.00			0.94			0.97	1.00
Satd. Flow (perm)	98	4530		267	4520			1505			1611	1364
Volume (vph)	84	1218	21	26	1929	47	27	165	48	17	200	101
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	1353	23	29	2143	52	30	183	53	19	222	112
RTOR Reduction (vph)	0	2	0	0	3	0	0	9	0	0	0	9
Lane Group Flow (vph)	93	1374	0	29	2192	0	0	257	0	0	241	103
Confl. Peds. (#/hr)	47		44	44		47	18		31	31		18
Confl. Bikes (#/hr)			3			2			4			1
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	69.0	69.0		69.0	69.0			25.0			25.0	25.0
Effective Green, g (s)	68.0	68.0		68.0	68.0			24.0			24.0	24.0
Actuated g/C Ratio	0.68	0.68		0.68	0.68			0.24			0.24	0.24
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0			3.0			3.0	3.0
Lane Grp Cap (vph)	67	3080		182	3074			361			387	327
v/s Ratio Prot		0.30			0.49							
v/s Ratio Perm	c0.95			0.11				c0.17			0.15	0.08
v/c Ratio	1.39	0.45		0.16	0.71			0.71			0.62	0.31
Uniform Delay, d1	16.0	7.4		5.7	9.9			34.8			34.0	31.2
Progression Factor	0.79	0.38		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	206.9	0.2		1.9	1.4			11.3			7.4	2.5
Delay (s)	219.5	3.0		7.6	11.4			46.1			41.3	33.7
Level of Service	F	A		A	B			D			D	C
Approach Delay (s)		16.7			11.3			46.1			38.9	
Approach LOS		B			B			D			D	

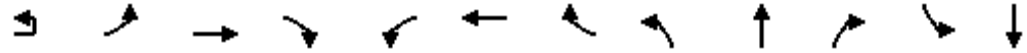
Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘↗	↑↑↗		↘↗	↑↑↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.91		0.97	0.91	
Frbp, ped/bikes	1.00	1.00	0.91	1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3167	1295	1570	3113		3072	4457		3072	4449	
Flt Permitted	0.11	1.00	1.00	0.33	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	187	3167	1295	537	3113		3072	4457		3072	4449	
Volume (vph)	190	463	42	303	1308	93	176	1360	85	38	2185	215
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	207	503	46	329	1422	101	191	1478	92	41	2375	234
RTOR Reduction (vph)	0	0	32	0	4	0	0	5	0	0	10	0
Lane Group Flow (vph)	207	503	14	329	1519	0	191	1565	0	41	2599	0
Conf. Peds. (#/hr)	63		49	49		63	51		51	51		51
Conf. Bikes (#/hr)			3			3			6			3
Turn Type	pm+pt		Perm	pm+pt		Prot		Prot				
Protected Phases	1	6		5	2	3	8		7	4		
Permitted Phases	6		6	2								
Actuated Green, G (s)	48.8	34.2	34.2	49.6	34.6	13.6	48.8		4.6	39.8		
Effective Green, g (s)	49.2	35.6	35.6	50.0	36.0	13.6	49.8		4.6	40.8		
Actuated g/C Ratio	0.41	0.30	0.30	0.42	0.30	0.11	0.41		0.04	0.34		
Clearance Time (s)	3.0	5.4	5.4	3.0	5.4	4.0	5.0		4.0	5.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	235	940	384	344	934	348	1850		118	1513		
v/s Ratio Prot	0.10	0.16		c0.11	c0.49	0.06	c0.35		0.01	c0.58		
v/s Ratio Perm	0.26		0.01	0.29								
v/c Ratio	0.88	0.54	0.04	0.96	1.63	0.55	0.85		0.35	1.72		
Uniform Delay, d1	31.6	35.3	30.0	30.0	42.0	50.3	31.6		56.2	39.6		
Progression Factor	1.62	0.73	0.62	1.00	1.00	0.76	0.64		1.25	0.40		
Incremental Delay, d2	25.7	0.5	0.0	36.8	286.7	1.5	4.3		0.2	323.3		
Delay (s)	77.1	26.4	18.6	66.8	328.7	40.0	24.6		70.4	339.1		
Level of Service	E	C	B	E	F	D	C		E	F		
Approach Delay (s)		39.8			282.1		26.2			334.9		
Approach LOS		D			F		C			F		

Intersection Summary

HCM Average Control Delay	211.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	127.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↑↑		↔	↑↑↑	↔	↔		↔	↔	↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00		0.91		1.00	0.86	0.86	1.00		1.00	0.97	
Frt	1.00		0.99		1.00	1.00	0.85	1.00		0.85	1.00	
Flt Protected	0.95		1.00		0.95	1.00	1.00	0.95		1.00	0.95	
Satd. Flow (prot)	1583		4522		1583	4300	1218	1583		1417	3072	
Flt Permitted	0.95		1.00		0.95	1.00	1.00	0.95		1.00	0.95	
Satd. Flow (perm)	1583		4522		1583	4300	1218	1583		1417	3072	
Volume (vph)	2	0	592	25	6	1620	822	13	0	13	783	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	2	0	637	27	6	1742	884	14	0	14	842	0
RTOR Reduction (vph)	0	0	2	0	0	0	289	0	0	13	0	0
Lane Group Flow (vph)	2	0	662	0	6	1742	595	14	0	1	842	0
Turn Type	Prot				Prot		Perm	Prot			custom	custom
Protected Phases	5		2		1		6			7		
Permitted Phases							6				7	8
Actuated Green, G (s)	3.2		71.4		1.4		68.7			4.4		21.0
Effective Green, g (s)	5.1		72.4		3.3		70.6			5.4		22.9
Actuated g/C Ratio	0.04		0.60		0.03		0.59			0.05		0.19
Clearance Time (s)	5.9		5.0		5.9		5.9			5.0		5.9
Vehicle Extension (s)	3.0		3.0		3.0		3.0			3.0		3.0
Lane Grp Cap (vph)	67		2728		44		2530			71		586
v/s Ratio Prot	0.00		c0.15		0.00		0.41			c0.01		
v/s Ratio Perm							c0.49				0.00	c0.27
v/c Ratio	0.03		0.24		0.14		0.69			0.20		1.44
Uniform Delay, d1	55.1		11.1		57.0		17.1			19.9		55.2
Progression Factor	1.06		1.45		1.09		0.81			3.62		1.00
Incremental Delay, d2	0.1		0.2		0.3		0.4			2.8		1.4
Delay (s)	58.8		16.2		62.3		14.3			74.8		56.6
Level of Service	E		B		E		B			E		F
Approach Delay (s)			16.3				34.7			55.7		231.6
Approach LOS			B				C			E		F
Intersection Summary												
HCM Average Control Delay			79.2				HCM Level of Service			E		
HCM Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			73.4%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												



Movement		SBR
Lane Configurations		7
Ideal Flow (vphpl)		1700
Total Lost time (s)		4.0
Lane Util. Factor		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1417
Flt Permitted		1.00
Satd. Flow (perm)		1417
Volume (vph)		191
Peak-hour factor, PHF		0.93
Adj. Flow (vph)		205
RTOR Reduction (vph)		156
Lane Group Flow (vph)		49
Turn Type		custom
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		21.0
Effective Green, g (s)		22.9
Actuated g/C Ratio		0.19
Clearance Time (s)		5.9
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		270
v/s Ratio Prot		
v/s Ratio Perm		0.03
v/c Ratio		0.18
Uniform Delay, d1		40.7
Progression Factor		3.43
Incremental Delay, d2		0.7
Delay (s)		140.3
Level of Service		F
Approach Delay (s)		
Approach LOS		
Intersection Summary		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑	↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor		0.86	1.00		0.86	1.00	1.00	0.91			0.91	
Frt		1.00	0.85		1.00	0.85	1.00	1.00			0.96	
Flt Protected		1.00	1.00		1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)		5733	1417		5733	1417	1583	4548			4383	
Flt Permitted		1.00	1.00		1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)		5733	1417		5733	1417	1583	4548			4383	
Volume (vph)	0	1067	296	0	1517	314	303	1365	4	0	1872	605
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1089	302	0	1548	320	309	1393	4	0	1910	617
RTOR Reduction (vph)	0	0	2	0	0	30	0	0	0	0	2	0
Lane Group Flow (vph)	0	1089	300	0	1548	290	309	1397	0	0	2525	0
Turn Type		pm+ov			Perm		Prot					
Protected Phases		8	1		4		1	6			2	
Permitted Phases		8	8			4						
Actuated Green, G (s)		39.0	49.0		39.0	39.0	10.0	69.0			53.5	
Effective Green, g (s)		41.0	52.5		41.0	41.0	11.5	71.0			55.5	
Actuated g/C Ratio		0.34	0.44		0.34	0.34	0.10	0.59			0.46	
Clearance Time (s)		6.0	5.5		6.0	6.0	5.5	6.0			6.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)		1959	667		1959	484	152	2691			2027	
v/s Ratio Prot		0.19	0.04		c0.27		c0.20	0.31			c0.58	
v/s Ratio Perm			0.17			0.20						
v/c Ratio		0.56	0.45		0.79	0.60	2.03	0.52			1.25	
Uniform Delay, d1		32.1	23.6		35.6	32.7	54.2	14.4			32.2	
Progression Factor		1.31	1.89		1.00	1.00	1.23	0.76			0.34	
Incremental Delay, d2		0.5	0.2		3.3	5.4	483.9	0.6			110.9	
Delay (s)		42.6	44.8		39.0	38.1	550.9	11.6			121.9	
Level of Service		D	D		D	D	F	B			F	
Approach Delay (s)		43.1			38.8			109.3			121.9	
Approach LOS		D			D			F			F	

Intersection Summary

HCM Average Control Delay	83.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↑↑↑		↗	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.95			0.99		1.00	1.00		1.00	0.98	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1563			1611		1583	4533		1583	4474	
Flt Permitted		0.89			0.80		0.06	1.00		0.11	1.00	
Satd. Flow (perm)		1405			1320		104	4533		180	4474	
Volume (vph)	50	59	61	50	61	12	93	1566	40	75	1758	220
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	62	64	53	64	13	98	1648	42	79	1851	232
RTOR Reduction (vph)	0	17	0	0	3	0	0	2	0	0	13	0
Lane Group Flow (vph)	0	162	0	0	127	0	98	1688	0	79	2070	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		8		8		2		6		6	
Permitted Phases	4		8		8		2		6		6	
Actuated Green, G (s)	30.0		30.0		30.0		83.4		83.4		83.4	
Effective Green, g (s)	29.0		29.0		29.0		83.0		83.0		83.0	
Actuated g/C Ratio	0.24		0.24		0.24		0.69		0.69		0.69	
Clearance Time (s)	3.0		3.0		3.0		3.6		3.6		3.6	
Vehicle Extension (s)	3.0		3.0		3.0		5.0		5.0		5.0	
Lane Grp Cap (vph)	340		319		319		72		3135		125	
v/s Ratio Prot							0.37				0.46	
v/s Ratio Perm	c0.12		0.10		0.10		c0.94		0.44			
v/c Ratio	0.48		0.40		0.40		1.36		0.54		0.63	
Uniform Delay, d1	39.0		38.2		38.2		18.5		9.1		10.1	
Progression Factor	1.00		1.00		1.00		1.00		1.00		0.82	
Incremental Delay, d2	4.7		3.7		3.7		229.3		0.7		2.2	
Delay (s)	43.7		41.9		41.9		247.8		9.8		10.5	
Level of Service	D		D		D		F		A		B	
Approach Delay (s)	43.7		41.9		41.9		22.8				4.4	
Approach LOS	D		D		D		C				A	

Intersection Summary

HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑↑		↗	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.96		1.00	0.99		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4293		1583	4498		1583	4429		1583	4401	
Flt Permitted	0.11	1.00		0.11	1.00		0.11	1.00		0.12	1.00	
Satd. Flow (perm)	191	4293		192	4498		183	4429		193	4401	
Volume (vph)	123	1111	192	121	2030	62	535	1623	213	86	1639	212
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	129	1169	202	127	2137	65	563	1708	224	91	1725	223
RTOR Reduction (vph)	0	24	0	0	3	0	0	16	0	0	16	0
Lane Group Flow (vph)	129	1347	0	127	2199	0	563	1916	0	91	1932	0
Conf. Peds. (#/hr)	158		161	161		158	90		48	48		90
Conf. Bikes (#/hr)			4			7			3			1
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	44.0	35.4		43.8	35.3		44.5	36.5		40.7	34.6	
Effective Green, g (s)	42.5	34.9		42.3	34.8		43.5	36.5		39.7	34.6	
Actuated g/C Ratio	0.42	0.35		0.42	0.35		0.44	0.36		0.40	0.35	
Clearance Time (s)	3.0	3.5		3.0	3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	187	1498		186	1565		178	1617		148	1523	
v/s Ratio Prot	c0.05	0.31		0.05	c0.49		c0.22	0.43		0.03	0.44	
v/s Ratio Perm	0.24			0.24			c1.16			0.21		
v/c Ratio	0.69	0.90		0.68	1.40		3.16	1.18		0.61	1.27	
Uniform Delay, d1	24.1	30.9		21.1	32.6		48.7	31.8		25.3	32.7	
Progression Factor	1.03	1.18		1.65	1.26		1.84	0.92		1.00	1.00	
Incremental Delay, d2	7.6	8.3		5.8	185.1		979.5	86.1		5.2	126.1	
Delay (s)	32.3	44.7		40.7	226.0		1069.1	115.2		30.5	158.8	
Level of Service	C	D		D	F		F	F		C	F	
Approach Delay (s)		43.7			215.9			330.5			153.1	
Approach LOS		D			F			F			F	

Intersection Summary			
HCM Average Control Delay	203.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.29		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	141.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕↕		↕	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes		0.96			0.99		1.00	0.99		1.00	0.97	
Flpb, ped/bikes		1.00			0.99		0.99	1.00		1.00	1.00	
Frt		0.95			0.99		1.00	0.99		1.00	0.98	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1504			1588		1571	4459		1583	4339	
Flt Permitted		0.80			0.58		0.06	1.00		0.06	1.00	
Satd. Flow (perm)		1213			943		105	4459		104	4339	
Volume (vph)	58	150	128	181	307	50	125	2215	194	20	1686	221
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	61	158	135	191	323	53	132	2332	204	21	1775	233
RTOR Reduction (vph)	0	12	0	0	4	0	0	10	0	0	17	0
Lane Group Flow (vph)	0	342	0	0	563	0	132	2526	0	21	1991	0
Conf. Peds. (#/hr)	39		76	76		39	104		34	34		104
Conf. Bikes (#/hr)			2			2			6			4
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.0			29.0		64.2	64.2		64.2	64.2	
Effective Green, g (s)		28.0			28.0		64.0	64.0		64.0	64.0	
Actuated g/C Ratio		0.28			0.28		0.64	0.64		0.64	0.64	
Clearance Time (s)		3.0			3.0		3.8	3.8		3.8	3.8	
Vehicle Extension (s)		3.0			3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		340			264		67	2854		67	2777	
v/s Ratio Prot								0.57			0.46	
v/s Ratio Perm		0.28			c0.60		c1.26			0.20		
v/c Ratio		1.01			2.13		1.97	0.89		0.31	0.72	
Uniform Delay, d1		36.0			36.0		18.0	14.9		8.1	12.0	
Progression Factor		1.00			1.00		1.00	1.00		1.52	1.52	
Incremental Delay, d2		50.7			522.9		485.6	4.5		1.1	0.1	
Delay (s)		86.7			558.9		503.6	19.4		13.4	18.3	
Level of Service		F			F		F	B		B	B	
Approach Delay (s)		86.7			558.9			43.4			18.2	
Approach LOS		F			F			D			B	

Intersection Summary			
HCM Average Control Delay	89.0	HCM Level of Service	F
HCM Volume to Capacity ratio	2.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	126.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕↕↕		↔	↕↕↕		↔	↕↕↕		↔	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	1.00		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4482		1583	4536		1583	4532		1583	4466	
Flt Permitted	0.15	1.00		0.13	1.00		0.12	1.00		0.12	1.00	
Satd. Flow (perm)	256	4482		222	4536		196	4532		196	4466	
Volume (vph)	286	1495	166	165	2463	50	179	2117	56	116	1634	229
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	295	1541	171	170	2539	52	185	2182	58	120	1685	236
RTOR Reduction (vph)	0	15	0	0	2	0	0	3	0	0	17	0
Lane Group Flow (vph)	295	1697	0	170	2589	0	185	2237	0	120	1904	0
Turn Type	Perm		pm+pt		pm+pt		pm+pt		pm+pt			
Protected Phases	6		5		2		3		8		7	
Permitted Phases	6		2				8				4	
Actuated Green, G (s)	25.0	25.0		36.0	36.0		40.1	33.1		39.9	33.0	
Effective Green, g (s)	26.0	26.0		37.0	37.0		41.1	34.1		40.9	34.0	
Actuated g/C Ratio	0.29	0.29		0.41	0.41		0.46	0.38		0.45	0.38	
Clearance Time (s)	5.0	5.0		3.5	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	1295		197	1865		197	1717		195	1687	
v/s Ratio Prot		0.38		0.07	c0.57		c0.07	c0.49		0.05	0.43	
v/s Ratio Perm	c1.15			0.29			0.36			0.23		
v/c Ratio	3.99	1.31		0.86	1.39		0.94	1.30		0.62	1.13	
Uniform Delay, d1	32.0	32.0		42.9	26.5		21.1	27.9		20.9	28.0	
Progression Factor	0.70	0.70		1.00	1.00		1.67	0.36		1.00	1.00	
Incremental Delay, d2	1358.2	142.3		30.0	178.0		8.6	136.7		5.7	66.0	
Delay (s)	1380.6	164.5		72.9	204.5		43.9	146.7		26.6	94.0	
Level of Service	F	F		E	F		D	F		C	F	
Approach Delay (s)		343.3			196.4			138.8			90.0	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	189.7	HCM Level of Service	F
HCM Volume to Capacity ratio	2.13		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	139.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3092		1583	3119		1583	4511		1583	4487	
Flt Permitted	0.15	1.00		0.13	1.00		0.12	1.00		0.14	1.00	
Satd. Flow (perm)	256	3092		222	3119		202	4511		230	4487	
Volume (vph)	95	862	160	180	1463	162	420	2144	130	78	1693	173
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	98	889	165	186	1508	167	433	2210	134	80	1745	178
RTOR Reduction (vph)	0	17	0	0	1	0	0	7	0	0	9	0
Lane Group Flow (vph)	98	1037	0	186	1674	0	433	2337	0	80	1914	0
Turn Type	Perm		pm+pt		pm+pt		Perm					
Protected Phases	8		7		4		1		6		2	
Permitted Phases	8		4				6				2	
Actuated Green, G (s)	25.0	25.0		38.0	38.0		42.0	42.0		28.0	28.0	
Effective Green, g (s)	26.0	26.0		39.0	39.0		43.0	43.0		29.0	29.0	
Actuated g/C Ratio	0.29	0.29		0.43	0.43		0.48	0.48		0.32	0.32	
Clearance Time (s)	5.0	5.0		3.0	5.0		4.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	893		232	1352		250	2155		74	1446	
v/s Ratio Prot		0.34		0.08	c0.54		c0.19	0.52			0.43	
v/s Ratio Perm	0.38			0.27			c0.64			0.35		
v/c Ratio	1.32	1.16		0.80	1.24		1.73	1.08		1.08	1.32	
Uniform Delay, d1	32.0	32.0		21.1	25.5		42.2	23.5		30.5	30.5	
Progression Factor	1.00	1.00		0.77	0.96		1.00	1.00		0.99	0.96	
Incremental Delay, d2	213.8	84.9		1.9	107.7		345.6	46.7		55.6	146.2	
Delay (s)	245.8	116.9		18.1	132.2		387.9	70.2		85.8	175.6	
Level of Service	F	F		B	F		F	E		F	F	
Approach Delay (s)		127.9			120.8			119.7			172.0	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	134.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	139.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		0.98	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3090		1558	3099		1583	3142		1569	3030	
Flt Permitted	0.06	1.00		0.30	1.00		0.09	1.00		0.13	1.00	
Satd. Flow (perm)	100	3090		498	3099		147	3142		219	3030	
Volume (vph)	80	597	76	62	1463	132	119	827	30	94	818	154
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	90	671	85	70	1644	148	134	929	34	106	919	173
RTOR Reduction (vph)	0	8	0	0	6	0	0	2	0	0	9	0
Lane Group Flow (vph)	90	748	0	70	1786	0	134	961	0	106	1083	0
Conf. Peds. (#/hr)	50		50	50		50	50		50	50		50
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	6		2		2		8		8		4	
Permitted Phases	6		2		2		8		8		4	
Actuated Green, G (s)	64.6	64.6		64.6	64.6		44.1	44.1		44.1	44.1	
Effective Green, g (s)	66.5	66.5		66.5	66.5		45.5	45.5		45.5	45.5	
Actuated g/C Ratio	0.55	0.55		0.55	0.55		0.38	0.38		0.38	0.38	
Clearance Time (s)	5.9	5.9		5.9	5.9		5.4	5.4		5.4	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	55	1712		276	1717		56	1191		83	1149	
v/s Ratio Prot		0.24			0.58			0.31			0.36	
v/s Ratio Perm	c0.90			0.14			c0.91			0.48		
v/c Ratio	1.64	0.44		0.25	1.04		2.39	0.81		1.28	0.94	
Uniform Delay, d1	26.8	15.7		13.9	26.8		37.2	33.3		37.2	36.0	
Progression Factor	1.00	1.00		0.40	0.75		1.17	1.15		1.00	1.00	
Incremental Delay, d2	354.4	0.8		0.2	20.3		664.0	4.3		190.2	15.9	
Delay (s)	381.1	16.5		5.7	40.3		707.5	42.6		227.5	51.9	
Level of Service	F	B		A	D		F	D		F	D	
Approach Delay (s)		55.3			39.0			123.8			67.4	
Approach LOS		E			D			F			E	

Intersection Summary

HCM Average Control Delay	67.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	111.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1583	4531		1583	4542			1610			1597	
Flt Permitted	0.06	1.00		0.16	1.00			0.92			0.94	
Satd. Flow (perm)	100	4531		274	4542			1501			1518	
Volume (vph)	21	1267	36	44	2620	32	43	173	52	22	112	49
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	22	1320	38	46	2729	33	45	180	54	23	117	51
RTOR Reduction (vph)	0	3	0	0	1	0	0	9	0	0	3	0
Lane Group Flow (vph)	22	1355	0	46	2761	0	0	270	0	0	188	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	68.0	68.0		68.0	68.0			26.0			26.0	
Effective Green, g (s)	67.0	67.0		67.0	67.0			25.0			25.0	
Actuated g/C Ratio	0.67	0.67		0.67	0.67			0.25			0.25	
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0			3.0			3.0	
Lane Grp Cap (vph)	67	3036		184	3043			375			380	
v/s Ratio Prot		0.30			c0.61							
v/s Ratio Perm	0.22			0.17				c0.18			0.12	
v/c Ratio	0.33	0.45		0.25	0.91			0.72			0.49	
Uniform Delay, d1	7.0	7.8		6.5	13.9			34.3			32.1	
Progression Factor	0.59	0.31		0.28	0.75			1.00			1.00	
Incremental Delay, d2	9.1	0.3		0.3	0.5			11.3			4.5	
Delay (s)	13.2	2.8		2.1	11.0			45.6			36.6	
Level of Service	B	A		A	B			D			D	
Approach Delay (s)		2.9			10.8			45.6			36.6	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3167	1417	1583	4550	1417	1583	1667	1417	1583	1643	
Flt Permitted	0.23	1.00	1.00	0.25	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	388	3167	1417	412	4550	1417	1583	1667	1417	1583	1643	
Volume (vph)	86	625	91	108	1428	94	82	580	35	40	731	76
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	92	672	98	116	1535	101	88	624	38	43	786	82
RTOR Reduction (vph)	0	0	70	0	0	72	0	0	21	0	6	0
Lane Group Flow (vph)	92	672	28	116	1535	29	88	624	17	43	862	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4			4		1	2			1	6
Permitted Phases	4		4	4		4			2			
Actuated Green, G (s)	16.2	16.2	16.2	16.2	16.2	16.2	3.4	26.6	26.6	3.4	26.6	
Effective Green, g (s)	17.2	17.2	17.2	17.2	17.2	17.2	3.4	27.4	27.4	3.4	27.4	
Actuated g/C Ratio	0.29	0.29	0.29	0.29	0.29	0.29	0.06	0.46	0.46	0.06	0.46	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.8	4.8	4.0	4.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	908	406	118	1304	406	90	761	647	90	750	
v/s Ratio Prot		0.21			c0.34		c0.06	0.37		0.03	c0.52	
v/s Ratio Perm	0.24		0.02	0.28		0.02			0.01			
v/c Ratio	0.83	0.74	0.07	0.98	1.18	0.07	0.98	0.82	0.03	0.48	1.15	
Uniform Delay, d1	20.0	19.4	15.6	21.3	21.4	15.6	28.3	14.2	9.0	27.4	16.3	
Progression Factor	1.00	1.00	1.00	1.29	1.36	1.79	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	48.3	5.4	0.3	69.5	86.4	0.3	86.7	9.6	0.1	4.0	82.3	
Delay (s)	68.3	24.8	15.9	96.9	115.5	28.1	114.9	23.8	9.0	31.4	98.6	
Level of Service	E	C	B	F	F	C	F	C	A	C	F	
Approach Delay (s)		28.4			109.2			33.7			95.4	
Approach LOS		C			F			C			F	
Intersection Summary												
HCM Average Control Delay			76.7				HCM Level of Service		E			
HCM Volume to Capacity ratio			1.15									
Actuated Cycle Length (s)			60.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			105.7%				ICU Level of Service		G			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4478		1583	4529		1583	3108		1583	3101	
Flt Permitted	0.09	1.00		0.11	1.00		0.13	1.00		0.15	1.00	
Satd. Flow (perm)	153	4478		180	4529		215	3108		243	3101	
Volume (vph)	91	1152	137	54	2429	78	148	686	98	53	801	129
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	98	1239	147	58	2612	84	159	738	105	57	861	139
RTOR Reduction (vph)	0	14	0	0	3	0	0	10	0	0	13	0
Lane Group Flow (vph)	98	1372	0	58	2693	0	159	833	0	57	987	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	51.0	44.6		49.8	44.0		40.0	32.0		35.2	29.6	
Effective Green, g (s)	49.0	43.6		47.8	43.0		38.0	31.0		33.2	28.6	
Actuated g/C Ratio	0.49	0.44		0.48	0.43		0.38	0.31		0.33	0.29	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	152	1952		153	1947		177	963		142	887	
v/s Ratio Prot	c0.03	0.31		0.02	c0.59		c0.06	0.27		0.02	c0.32	
v/s Ratio Perm	0.28			0.16			0.28			0.11		
v/c Ratio	0.64	0.70		0.38	1.38		0.90	0.86		0.40	1.11	
Uniform Delay, d1	23.4	22.9		16.0	28.5		25.6	32.5		24.6	35.7	
Progression Factor	2.15	2.02		1.31	1.50		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.5	1.7		0.2	173.7		38.9	10.2		0.7	66.2	
Delay (s)	55.7	48.0		21.2	216.5		64.5	42.7		25.3	101.9	
Level of Service	E	D		C	F		E	D		C	F	
Approach Delay (s)		48.5			212.4			46.2			97.7	
Approach LOS		D			F			D			F	

Intersection Summary

HCM Average Control Delay	128.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	111.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑↑↓		↔	↑↑↓		↔	↑↓		↔	↑↓	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Fr _t	1.00	0.99		1.00	1.00		1.00	0.97		1.00	0.98	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4483		1583	4541		1583	3067		1583	3102	
Fl _t Permitted	0.11	1.00		0.10	1.00		0.14	1.00		0.17	1.00	
Satd. Flow (perm)	186	4483		175	4541		239	3067		275	3102	
Volume (vph)	82	1463	160	202	2564	34	166	889	237	49	861	135
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	87	1556	170	215	2728	36	177	946	252	52	916	144
RTOR Reduction (vph)	0	15	0	0	2	0	0	25	0	0	14	0
Lane Group Flow (vph)	87	1711	0	215	2762	0	177	1173	0	52	1046	0
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt		pm+pt		pm+pt	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	42.5	36.8		47.1	39.1		36.2	28.9		29.5	25.2	
Effective Green, g (s)	40.5	35.8		45.1	38.1		34.9	27.9		27.5	24.2	
Actuated g/C Ratio	0.45	0.40		0.50	0.42		0.39	0.31		0.31	0.27	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	157	1783		197	1922		197	951		132	834	
v/s Ratio Prot	0.03	0.38		c0.08	c0.61		c0.07	c0.38		0.01	0.34	
v/s Ratio Perm	0.22			0.46			0.28			0.11		
v/c Ratio	0.55	0.96		1.09	1.44		0.90	1.23		0.39	1.25	
Uniform Delay, d ₁	21.5	26.4		21.3	25.9		43.1	31.1		25.7	32.9	
Progression Factor	1.00	1.00		1.95	0.40		1.00	1.00		1.00	1.00	
Incremental Delay, d ₂	2.4	13.7		49.3	197.0		36.2	114.3		0.7	124.3	
Delay (s)	23.9	40.1		91.0	207.5		79.3	145.4		26.4	157.2	
Level of Service	C	D		F	F		E	F		C	F	
Approach Delay (s)		39.3			199.1			136.9			151.0	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	140.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	116.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕↕↕		↗	↕↕↕		↗	↕	↗	↗	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.98		1.00	1.00		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	4464		1583	4536		1583	1667	1417	1583	2989	
Flt Permitted	0.09	1.00		0.10	1.00		0.12	1.00	1.00	0.13	1.00	
Satd. Flow (perm)	156	4464		173	4536		206	1667	1417	218	2989	
Volume (vph)	101	1162	168	69	2604	56	139	512	94	52	594	355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	106	1223	177	73	2741	59	146	539	99	55	625	374
RTOR Reduction (vph)	0	19	0	0	2	0	0	0	67	0	88	0
Lane Group Flow (vph)	106	1381	0	73	2798	0	146	539	32	55	911	0
Turn Type	pm+pt			pm+pt			pm+pt			Perm	pm+pt	
Protected Phases	5	2		1	6		3	8	8		7	4
Permitted Phases	2			6			8		8		4	
Actuated Green, G (s)	50.6	43.8		48.2	42.6		40.3	33.3	33.3	36.9	31.6	
Effective Green, g (s)	48.6	42.8		46.2	41.6		38.3	32.3	32.3	34.9	30.6	
Actuated g/C Ratio	0.49	0.43		0.46	0.42		0.38	0.32	0.32	0.35	0.31	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	159	1911		145	1887		162	538	458	135	915	
v/s Ratio Prot	c0.04	0.31		0.02	c0.62		c0.05	c0.32		0.02	0.30	
v/s Ratio Perm	0.29			0.21			0.29		0.02	0.12		
v/c Ratio	0.67	0.72		0.50	1.48		0.90	1.00	0.07	0.41	1.00	
Uniform Delay, d1	23.3	23.7		17.2	29.2		25.8	33.9	23.4	24.8	34.6	
Progression Factor	0.86	1.15		2.12	1.72		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.9	2.1		0.1	217.4		42.5	39.3	0.3	0.7	28.7	
Delay (s)	26.9	29.3		36.6	267.8		68.3	73.1	23.7	25.6	63.3	
Level of Service	C	C		D	F		E	E	C	C	E	
Approach Delay (s)		29.2			261.9			66.0			61.3	
Approach LOS		C			F			E			E	

Intersection Summary

HCM Average Control Delay	146.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	116.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	2221		1118	2232		1118	2177		1118	2231	
Flt Permitted	0.07	1.00		0.09	1.00		0.27	1.00		0.66	1.00	
Satd. Flow (perm)	77	2221		110	2232		315	2177		781	2231	
Volume (vph)	27	1531	66	53	2114	22	9	112	23	114	507	7
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	28	1578	68	55	2179	23	9	115	24	118	523	7
RTOR Reduction (vph)	0	4	0	0	1	0	0	18	0	0	1	0
Lane Group Flow (vph)	28	1642	0	55	2201	0	9	121	0	118	529	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	60.5	60.5		60.5	60.5		20.8	20.8		20.8	20.8	
Effective Green, g (s)	61.0	61.0		61.0	61.0		21.0	21.0		21.0	21.0	
Actuated g/C Ratio	0.68	0.68		0.68	0.68		0.23	0.23		0.23	0.23	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	52	1505		75	1513		74	508		182	521	
v/s Ratio Prot		0.74			c0.99			0.06			c0.24	
v/s Ratio Perm	0.36			0.50			0.03			0.15		
v/c Ratio	0.54	1.09		0.73	1.45		0.12	0.24		0.65	1.02	
Uniform Delay, d1	7.4	14.5		9.3	14.5		27.2	28.0		31.2	34.5	
Progression Factor	0.35	0.38		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.6	42.3		47.3	208.4		3.3	1.1		16.5	43.5	
Delay (s)	6.2	47.9		56.6	222.9		30.6	29.1		47.7	78.0	
Level of Service	A	D		E	F		C	C		D	E	
Approach Delay (s)		47.2			218.8			29.2			72.4	
Approach LOS		D			F			C			E	

Intersection Summary

HCM Average Control Delay	132.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	130.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						0.95			0.95	
Frbp, ped/bikes		1.00						1.00			1.00	
Flpb, ped/bikes		0.99						1.00			1.00	
Frt		0.99						0.97			1.00	
Flt Protected		0.98						1.00			0.99	
Satd. Flow (prot)		3031						3056			3146	
Flt Permitted		0.98						1.00			0.90	
Satd. Flow (perm)		3031						3056			2863	
Volume (vph)	176	214	17	0	0	0	0	101	26	38	289	0
Peak-hour factor, PHF	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Adj. Flow (vph)	229	278	22	0	0	0	0	131	34	49	375	0
RTOR Reduction (vph)	0	3	0	0	0	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	526		0	0	0	0	140	0	0	424	
Conf. Peds. (#/hr)	28		18	18			28	6		7	7	6
Conf. Bikes (#/hr)			1							1		1
Turn Type	Perm						Perm					
Protected Phases		2						8			4	
Permitted Phases	2								4			
Actuated Green, G (s)		37.0						17.0			17.0	
Effective Green, g (s)		36.0						16.0			16.0	
Actuated g/C Ratio		0.60						0.27			0.27	
Clearance Time (s)		3.0						3.0			3.0	
Vehicle Extension (s)		5.0						3.0			3.0	
Lane Grp Cap (vph)		1819						815			763	
v/s Ratio Prot								0.05				
v/s Ratio Perm		0.17									c0.15	
v/c Ratio		0.29						0.17			0.56	
Uniform Delay, d1		5.8						16.9			18.9	
Progression Factor		1.13						1.00			1.00	
Incremental Delay, d2		0.3						0.5			2.9	
Delay (s)		6.9						17.4			21.8	
Level of Service		A						B			C	
Approach Delay (s)		6.9			0.0			17.4			21.8	
Approach LOS		A			A			B			C	
Intersection Summary												
HCM Average Control Delay		14.1			HCM Level of Service			B				
HCM Volume to Capacity ratio		0.37										
Actuated Cycle Length (s)		60.0			Sum of lost time (s)			8.0				
Intersection Capacity Utilization		54.2%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑				↗		↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0				4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91				1.00		1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99				0.97		1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		0.98	1.00
Frt	1.00	1.00		1.00	0.98				0.86		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00				1.00		0.95	1.00
Satd. Flow (prot)	1583	4527		1583	4399				1396		1561	1371
Flt Permitted	0.95	1.00		0.95	1.00				1.00		0.95	1.00
Satd. Flow (perm)	1583	4527		1583	4399				1396		1561	1371
Volume (vph)	51	1335	26	89	2419	456	0	0	45	123	5	166
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	53	1391	27	93	2520	475	0	0	47	128	5	173
RTOR Reduction (vph)	0	2	0	0	23	0	0	0	36	0	0	133
Lane Group Flow (vph)	53	1416	0	93	2972	0	0	0	11	0	133	40
Confl. Peds. (#/hr)	18		42	42		18	15		14	14		15
Confl. Bikes (#/hr)			2			1			1			
Turn Type	Prot			Prot				custom	Perm		Perm	
Protected Phases	5	2		1	6						4	
Permitted Phases								8	4			4
Actuated Green, G (s)	6.8	58.1		8.9	60.2			24.0			24.0	24.0
Effective Green, g (s)	5.8	57.1		7.9	59.2			23.0			23.0	23.0
Actuated g/C Ratio	0.06	0.57		0.08	0.59			0.23			0.23	0.23
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Vehicle Extension (s)	2.0	5.0		2.0	5.0			3.0			3.0	3.0
Lane Grp Cap (vph)	92	2585		125	2604			321			359	315
v/s Ratio Prot	0.03	0.31		c0.06	c0.68							
v/s Ratio Perm								0.01			0.09	0.03
v/c Ratio	0.58	0.55		0.74	1.14			0.03			0.37	0.13
Uniform Delay, d1	45.9	13.4		45.1	20.4			29.9			32.4	30.5
Progression Factor	1.00	1.00		0.69	1.78			1.00			1.00	1.00
Incremental Delay, d2	5.3	0.8		1.9	64.0			0.2			2.9	0.8
Delay (s)	51.2	14.2		33.1	100.3			30.1			35.3	31.4
Level of Service	D	B		C	F			C			D	C
Approach Delay (s)		15.6			98.3			30.1			33.1	
Approach LOS		B			F			C			C	
Intersection Summary												
HCM Average Control Delay			68.8			HCM Level of Service			E			
HCM Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			95.5%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	2230		1118	2233		1118	2217		1118	2202	
Flt Permitted	0.07	1.00		0.07	1.00		0.15	1.00		0.29	1.00	
Satd. Flow (perm)	84	2230		84	2233		181	2217		347	2202	
Volume (vph)	32	1635	25	254	1953	15	26	522	29	26	733	81
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	33	1668	26	259	1993	15	27	533	30	27	748	83
RTOR Reduction (vph)	0	1	0	0	1	0	0	4	0	0	9	0
Lane Group Flow (vph)	33	1693	0	259	2007	0	27	559	0	27	822	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	55.5	55.5		55.5	55.5		25.8	25.8		25.8	25.8	
Effective Green, g (s)	56.0	56.0		56.0	56.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio	0.62	0.62		0.62	0.62		0.29	0.29		0.29	0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	52	1388		52	1389		52	640		100	636	
v/s Ratio Prot		0.76			0.90			0.25			c0.37	
v/s Ratio Perm	0.39			c3.08			0.15			0.08		
v/c Ratio	0.63	1.22		4.98	1.45		0.52	0.87		0.27	1.29	
Uniform Delay, d1	10.6	17.0		17.0	17.0		26.8	30.4		24.7	32.0	
Progression Factor	1.00	1.00		0.59	0.59		0.43	0.35		1.00	1.00	
Incremental Delay, d2	46.8	105.6		1795.2	200.7		13.9	6.8		6.5	142.9	
Delay (s)	57.4	122.6		1805.3	210.7		25.3	17.5		31.2	174.9	
Level of Service	E	F		F	F		C	B		C	F	
Approach Delay (s)		121.3			392.9			17.8			170.4	
Approach LOS		F			F			B			F	

Intersection Summary

HCM Average Control Delay	231.0	HCM Level of Service	F
HCM Volume to Capacity ratio	3.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	141.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↕		↰	↕		↰	↕	↰		↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00		0.95	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1118	2205		1118	2231		1118	2235	1000		2213	
Flt Permitted	0.07	1.00		0.24	1.00		0.15	1.00	1.00		1.00	
Satd. Flow (perm)	84	2205		277	2231		181	2235	1000		2213	
Volume (vph)	56	818	80	222	1735	24	65	497	97	0	922	67
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	909	89	247	1928	27	72	552	108	0	1024	74
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	77	0	6	0
Lane Group Flow (vph)	62	995	0	247	1954	0	72	552	31	0	1092	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			8		4
Permitted Phases	2			6			8			8		
Actuated Green, G (s)	55.5	55.5		55.5	55.5		25.8	25.8	25.8		25.8	
Effective Green, g (s)	56.0	56.0		56.0	56.0		26.0	26.0	26.0		26.0	
Actuated g/C Ratio	0.62	0.62		0.62	0.62		0.29	0.29	0.29		0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2	4.2		4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	52	1372		172	1388		52	646	289		639	
v/s Ratio Prot		0.45			0.88			0.25			c0.49	
v/s Ratio Perm	0.74			c0.89			0.40		0.03			
v/c Ratio	1.19	0.73		1.44	1.41		1.38	0.85	0.11		1.71	
Uniform Delay, d1	17.0	11.7		17.0	17.0		32.0	30.2	23.5		32.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		0.62	
Incremental Delay, d2	186.3	3.4		226.1	187.8		257.0	13.6	0.8		319.8	
Delay (s)	203.3	15.1		243.1	204.8		289.0	43.8	24.2		339.6	
Level of Service	F	B		F	F		F	D	C		F	
Approach Delay (s)		26.1			209.1			65.0			339.6	
Approach LOS		C			F			E			F	

Intersection Summary

HCM Average Control Delay	178.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	148.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						0.95			0.95	
Frbp, ped/bikes		0.99						0.98			1.00	
Flpb, ped/bikes		0.99						1.00			1.00	
Frt		0.93						0.96			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		2860						2979			3144	
Flt Permitted		0.99						1.00			0.65	
Satd. Flow (perm)		2860						2979			2058	
Volume (vph)	35	113	141	0	0	0	0	762	236	86	681	0
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	38	124	155	0	0	0	0	837	259	95	748	0
RTOR Reduction (vph)	0	63	0	0	0	0	0	49	0	0	0	0
Lane Group Flow (vph)	0	254	0	0	0	0	0	1047	0	0	843	0
Confl. Peds. (#/hr)	123		3	3			123	1		108	108	1
Confl. Bikes (#/hr)							6			4		2
Turn Type	Perm						Perm					
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		27.0						27.0			27.0	
Effective Green, g (s)		26.0						26.0			26.0	
Actuated g/C Ratio		0.43						0.43			0.43	
Clearance Time (s)		3.0						3.0			3.0	
Vehicle Extension (s)		3.0						3.0			3.0	
Lane Grp Cap (vph)		1239						1291			892	
v/s Ratio Prot								0.35				
v/s Ratio Perm		0.09									c0.41	
v/c Ratio		0.21						0.81			0.95	
Uniform Delay, d1		10.6						14.9			16.3	
Progression Factor		0.61						1.00			1.00	
Incremental Delay, d2		0.4						5.6			19.4	
Delay (s)		6.8						20.5			35.8	
Level of Service		A						C			D	
Approach Delay (s)		6.8			0.0			20.5			35.8	
Approach LOS		A			A			C			D	
Intersection Summary												
HCM Average Control Delay			24.3					HCM Level of Service			C	
HCM Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)		8.0		
Intersection Capacity Utilization			84.8%					ICU Level of Service		E		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖		↖	↖↖↖		↖	↖↖	↖		↖↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00		0.95	1.00
Frbp, ped/bikes	1.00	0.97		1.00	0.99		1.00	1.00	0.86		1.00	0.86
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1583	4330		1583	4469		1583	3167	1219		3167	1220
Flt Permitted	0.10	1.00		0.09	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	159	4330		145	4469		1583	3167	1219		3167	1220
Volume (vph)	61	1228	204	345	2099	91	292	901	97	0	788	194
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	64	1279	212	359	2186	95	304	939	101	0	821	202
RTOR Reduction (vph)	0	23	0	0	4	0	0	0	65	0	0	125
Lane Group Flow (vph)	64	1468	0	359	2277	0	304	939	36	0	821	77
Conf. Peds. (#/hr)	202		139	139		202	96		97	97		96
Conf. Bikes (#/hr)						3			1			1
Turn Type	pm+pt			pm+pt			Prot		Perm			Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases	2			6					8			4
Actuated Green, G (s)	48.4	43.0		56.0	47.6		9.9	35.9	35.9		22.9	22.9
Effective Green, g (s)	46.4	42.0		55.0	46.6		9.0	35.0	35.0		22.0	22.0
Actuated g/C Ratio	0.47	0.43		0.56	0.48		0.09	0.36	0.36		0.22	0.22
Clearance Time (s)	3.0	3.0		3.0	3.0		3.1	3.1	3.1		3.1	3.1
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	139	1856		213	2125		145	1131	435		711	274
v/s Ratio Prot	0.02	0.34		c0.15	0.51		c0.19	0.30			c0.26	
v/s Ratio Perm	0.20			c0.79					0.03			0.06
v/c Ratio	0.46	0.79		1.69	1.07		2.10	0.83	0.08		1.15	0.28
Uniform Delay, d1	21.2	24.2		25.9	25.7		44.5	28.8	20.9		38.0	31.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.9	3.5		328.0	41.9		516.1	7.1	0.4		85.1	2.6
Delay (s)	22.0	27.7		353.9	67.6		560.6	35.9	21.2		123.1	34.0
Level of Service	C	C		F	E		F	D	C		F	C
Approach Delay (s)		27.5			106.5			153.5			105.5	
Approach LOS		C			F			F			F	

Intersection Summary			
HCM Average Control Delay	97.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.56		
Actuated Cycle Length (s)	98.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕		↕	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.95			0.98		1.00	1.00		1.00	0.99	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2986			3066		1583	3153		1583	3133	
Flt Permitted		0.85			0.76		0.14	1.00		0.12	1.00	
Satd. Flow (perm)		2551			2385		229	3153		193	3133	
Volume (vph)	29	107	69	192	305	55	113	1238	36	44	1025	78
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	30	110	71	198	314	57	116	1276	37	45	1057	80
RTOR Reduction (vph)	0	49	0	0	10	0	0	2	0	0	6	0
Lane Group Flow (vph)	0	162	0	0	559	0	116	1311	0	45	1131	0
Turn Type	Perm		Perm		pm+pt		pm+pt					
Protected Phases	4		8		5		2		1		6	
Permitted Phases	4		8		2		6					
Actuated Green, G (s)	29.0		29.0		54.7		48.3		49.3		45.6	
Effective Green, g (s)	28.0		28.0		52.7		47.3		47.3		44.6	
Actuated g/C Ratio	0.31		0.31		0.59		0.53		0.53		0.50	
Clearance Time (s)	3.0		3.0		3.0		3.0		3.0		3.0	
Vehicle Extension (s)	3.0		3.0		2.0		5.0		2.0		5.0	
Lane Grp Cap (vph)	794		742		215		1657		143		1553	
v/s Ratio Prot					c0.03		c0.42		0.01		0.36	
v/s Ratio Perm	0.06		c0.23		0.28				0.16			
v/c Ratio	0.20		0.75		0.54		0.79		0.31		0.73	
Uniform Delay, d1	22.8		27.9		11.8		17.3		13.0		17.9	
Progression Factor	1.00		1.00		1.00		1.00		1.00		1.00	
Incremental Delay, d2	0.6		4.4		1.3		4.0		0.5		3.0	
Delay (s)	23.4		32.3		13.1		21.3		13.4		21.0	
Level of Service	C		C		B		C		B		C	
Approach Delay (s)	23.4		32.3		20.6		20.7					
Approach LOS	C		C		C		C					

Intersection Summary

HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑			↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95			0.95	
Frt	1.00	0.99		1.00	1.00		1.00	0.99			0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1583	4524		1583	4550		1583	3124			3058	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1583	4524		1583	4550		1583	3124			3058	
Volume (vph)	34	1827	71	10	3168	0	40	687	67	0	411	122
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	34	1845	72	10	3200	0	40	694	68	0	415	123
RTOR Reduction (vph)	0	4	0	0	0	0	0	8	0	0	31	0
Lane Group Flow (vph)	34	1913	0	10	3200	0	40	754	0	0	507	0
Turn Type	Prot		Prot		Split							
Protected Phases	1!	2!		5!	6!		8	8			7	
Permitted Phases												
Actuated Green, G (s)	5.2	33.8		4.8	33.2		14.0	14.0			22.0	
Effective Green, g (s)	4.7	33.3		4.8	33.2		14.0	14.0			22.0	
Actuated g/C Ratio	0.05	0.37		0.05	0.37		0.16	0.16			0.24	
Clearance Time (s)	3.5	3.5		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	83	1674		84	1678		246	486			748	
v/s Ratio Prot	c0.02	0.42		0.01	c0.70		0.03	c0.24			c0.17	
v/s Ratio Perm												
v/c Ratio	0.41	1.14		0.12	1.91		0.16	1.55			0.68	
Uniform Delay, d1	41.3	28.4		40.6	28.4		32.9	38.0			30.8	
Progression Factor	1.22	0.99		1.50	0.38		1.00	1.00			1.00	
Incremental Delay, d2	0.3	64.9		0.1	408.4		0.3	257.8			4.9	
Delay (s)	50.5	92.9		61.1	419.2		33.2	295.8			35.7	
Level of Service	D	F		E	F		C	F			D	
Approach Delay (s)		92.2			418.1			282.7			35.7	
Approach LOS		F			F			F			D	

Intersection Summary

HCM Average Control Delay	271.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	99.6%	ICU Level of Service	F
Analysis Period (min)	15		

! Phase conflict between lane groups.
 c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↑	↑↑↑		↑	↑↑		↑	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt		0.99		1.00	0.99		1.00	0.99		1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4521		1583	4517		1583	3146		1583	3167	
Flt Permitted		1.00		0.95	1.00		0.32	1.00		0.18	1.00	
Satd. Flow (perm)		4521		1583	4517		533	3146		303	3167	
Volume (vph)	0	1801	80	26	2877	147	270	939	44	53	460	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1896	84	27	3028	155	284	988	46	56	484	0
RTOR Reduction (vph)	0	5	0	0	6	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	1975	0	27	3177	0	284	1030	0	56	484	0
Turn Type				Prot			Perm			Perm		
Protected Phases		2!		5!	6		7		7		7	
Permitted Phases							7			7		
Actuated Green, G (s)		33.8		4.8	33.2		22.0	22.0		22.0	22.0	
Effective Green, g (s)		33.3		4.8	33.2		22.0	22.0		22.0	22.0	
Actuated g/C Ratio		0.37		0.05	0.37		0.24	0.24		0.24	0.24	
Clearance Time (s)		3.5		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1673		84	1666		130	769		74	774	
v/s Ratio Prot		0.44		c0.02	c0.70			0.33			0.15	
v/s Ratio Perm							c0.53			0.18		
v/c Ratio		1.18		0.32	1.91		2.18	1.34		0.76	0.63	
Uniform Delay, d1		28.4		41.0	28.4		34.0	34.0		31.5	30.3	
Progression Factor		0.29		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		81.8		2.2	410.5		557.5	161.6		51.5	3.8	
Delay (s)		90.2		43.2	438.9		591.5	195.6		83.0	34.1	
Level of Service		F		D	F		F	F		F	C	
Approach Delay (s)		90.2			435.6			280.9			39.2	
Approach LOS		F			F			F			D	

Intersection Summary

HCM Average Control Delay	279.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	30.0
Intersection Capacity Utilization	110.5%	ICU Level of Service	H
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕		↙	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0		4.0	4.0	
Lane Util. Factor		0.95						0.95		1.00	0.95	
Frbp, ped/bikes		1.00						0.97		1.00	1.00	
Flpb, ped/bikes		0.99						1.00		0.95	1.00	
Frt		1.00						0.94		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		3125						2890		1507	3167	
Flt Permitted		1.00						1.00		0.64	1.00	
Satd. Flow (perm)		3125						2890		1013	3167	
Volume (vph)	16	245	5	0	0	0	0	93	62	59	428	0
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	19	285	6	0	0	0	0	108	72	69	498	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	53	0	0	0	0
Lane Group Flow (vph)	0	308	0	0	0	0	0	127	0	69	498	0
Conf. Peds. (#/hr)	51		52	52			51	5		55	55	
Conf. Bikes (#/hr)								3				5
Turn Type		Perm									Perm	
Protected Phases		2						4			4	
Permitted Phases		2									4	
Actuated Green, G (s)		17.0						17.0		17.0	17.0	
Effective Green, g (s)		16.0						16.0		16.0	16.0	
Actuated g/C Ratio		0.27						0.27		0.27	0.27	
Clearance Time (s)		3.0						3.0		3.0	3.0	
Vehicle Extension (s)		5.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		833						771		270	845	
v/s Ratio Prot								0.04			c0.16	
v/s Ratio Perm		0.10								0.07		
v/c Ratio		0.37						0.16		0.26	0.59	
Uniform Delay, d1		17.9						16.9		17.3	19.1	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		1.3						0.5		2.3	3.0	
Delay (s)		19.2						17.3		19.6	22.1	
Level of Service		B						B		B	C	
Approach Delay (s)		19.2			0.0			17.3			21.8	
Approach LOS		B			A			B			C	
Intersection Summary												
HCM Average Control Delay			20.3					HCM Level of Service			C	
HCM Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)		28.0		
Intersection Capacity Utilization			83.0%					ICU Level of Service		E		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗			↗↗↗		↗	↗		↗	↗	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91			0.91		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00			0.99		1.00	0.90		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			1.00		0.84	1.00		1.00	1.00	1.00
Frt	1.00	1.00			1.00		1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4525			4511		1334	1420		1583	1667	1102
Flt Permitted	0.08	1.00			1.00		0.62	1.00		0.95	1.00	1.00
Satd. Flow (perm)	133	4525			4511		873	1420		1583	1667	1102
Volume (vph)	39	1268	14	0	2449	47	105	76	42	93	209	110
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	41	1321	15	0	2551	49	109	79	44	97	218	115
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	0	0	0	0
Lane Group Flow (vph)	41	1335	0	0	2598	0	109	123	0	97	218	115
Conf. Peds. (#/hr)	244		131	131		244	166		211	211		166
Conf. Bikes (#/hr)			3			5			2			3
Turn Type	Perm			Perm			Prot			custom		
Protected Phases	2			6			8			7		
Permitted Phases	2						8			4 4		
Actuated Green, G (s)	51.3	51.3			51.3		21.0	21.0		8.7	32.7	32.7
Effective Green, g (s)	50.3	50.3			50.3		20.0	20.0		7.7	31.7	31.7
Actuated g/C Ratio	0.56	0.56			0.56		0.22	0.22		0.09	0.35	0.35
Clearance Time (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Vehicle Extension (s)	5.0	5.0			5.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	2529			2521		194	316		135	587	388
v/s Ratio Prot		0.29			c0.58			0.09		c0.06		
v/s Ratio Perm	0.31						c0.12				0.13	0.10
v/c Ratio	0.55	0.53			1.03		0.56	0.39		0.72	0.37	0.30
Uniform Delay, d1	12.7	12.4			19.9		31.1	29.8		40.1	21.7	21.1
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	26.7	0.8			26.3		11.3	3.6		16.7	1.8	1.9
Delay (s)	39.4	13.2			46.1		42.4	33.4		56.8	23.5	23.0
Level of Service	D	B			D		D	C		E	C	C
Approach Delay (s)		14.0			46.1			37.6			30.9	
Approach LOS		B			D			D			C	

Intersection Summary			
HCM Average Control Delay	34.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR2	
Lane Configurations		↔	↔↔↔		↔	↔↔↔			↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	
Total Lost time (s)		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00	
Frbp, ped/bikes		1.00	1.00		1.00	0.99			1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	
Frt		1.00	1.00		1.00	0.99			0.86	
Flt Protected		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)		1583	4521		1583	4482			1442	
Flt Permitted		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)		1583	4521		1583	4482			1442	
Volume (vph)	343	253	1320	36	560	1899	42	41	32	
Peak-hour factor, PHF	0.92	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.92	
Adj. Flow (vph)	373	264	1375	38	583	1978	44	43	35	
RTOR Reduction (vph)	0	0	3	0	0	2	0	0	31	
Lane Group Flow (vph)	0	637	1410	0	583	2063	0	0	4	
Conf. Peds. (#/hr)	63	81		28	28		63	81	35	
Conf. Bikes (#/hr)				5			9	10	1	
Turn Type	Prot	Prot			Prot				custom	
Protected Phases	1	1	2		8	6			1	
Permitted Phases										
Actuated Green, G (s)		13.0	52.0		26.0	81.0			13.0	
Effective Green, g (s)		12.0	51.0		25.0	80.0			12.0	
Actuated g/C Ratio		0.12	0.51		0.25	0.80			0.12	
Clearance Time (s)		3.0	3.0		3.0	3.0			3.0	
Vehicle Extension (s)		2.5	5.0		3.0	5.0			2.5	
Lane Grp Cap (vph)		190	2306		396	3586			173	
v/s Ratio Prot		c0.40	c0.31		c0.37	0.46			0.00	
v/s Ratio Perm										
v/c Ratio		3.35	0.61		1.47	0.58			0.02	
Uniform Delay, d1		44.0	17.4		37.5	3.7			38.8	
Progression Factor		1.25	1.96		1.00	1.00			1.00	
Incremental Delay, d2		1059.9	0.1		225.8	0.7			0.0	
Delay (s)		1114.9	34.3		263.3	4.4			38.9	
Level of Service		F	C		F	A			D	
Approach Delay (s)			370.1			61.4				
Approach LOS			F			E				
Intersection Summary										
HCM Average Control Delay			194.9						HCM Level of Service	F
HCM Volume to Capacity ratio			1.23							
Actuated Cycle Length (s)			100.0						Sum of lost time (s)	12.0
Intersection Capacity Utilization			102.3%						ICU Level of Service	G
Analysis Period (min)			15							
c Critical Lane Group										



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↖↗↘		↗	↖↗↘			↕	↗		↖↗↘	↗
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	0.86	0.86		1.00	0.91			0.95	1.00		0.86	0.86
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	961	3016		1118	3193			2235	1000		3035	860
Flt Permitted	0.95	0.69		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	961	2080		1118	3193			2235	1000		3035	860
Volume (vph)	727	1835	16	243	1845	76	0	977	165	0	1719	785
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	757	1911	17	253	1922	79	0	1018	172	0	1791	818
RTOR Reduction (vph)	0	1	0	0	4	0	0	0	122	0	0	319
Lane Group Flow (vph)	533	2151	0	253	1997	0	0	1018	50	0	1791	499
Turn Type	Prot		Prot				Perm				Over	
Protected Phases	7	4		3	8			2			6	7
Permitted Phases							2					
Actuated Green, G (s)	20.9	36.4		20.9	36.4			28.4	28.4		28.4	20.9
Effective Green, g (s)	22.0	37.0		22.0	37.0			29.0	29.0		29.0	22.0
Actuated g/C Ratio	0.22	0.37		0.22	0.37			0.29	0.29		0.29	0.22
Clearance Time (s)	5.1	4.6		5.1	4.6			4.6	4.6		4.6	5.1
Vehicle Extension (s)	3.0	3.0		5.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	211	976		246	1181			648	290		880	189
v/s Ratio Prot	0.55	0.49		0.23	c0.63			0.46			c0.59	c0.58
v/s Ratio Perm	c0.33						0.05					
v/c Ratio	2.53	2.20		1.03	1.69			1.57	0.17		2.04	2.64
Uniform Delay, d1	39.0	31.5		39.0	31.5			35.5	26.5		35.5	39.0
Progression Factor	1.00	1.00		1.05	0.58			1.00	1.00		1.00	1.00
Incremental Delay, d2	700.6	545.3		25.0	311.1			264.4	1.3		469.8	753.1
Delay (s)	739.6	576.8		65.8	329.2			299.9	27.8		505.3	792.1
Level of Service	F	F		E	F			F	C		F	F
Approach Delay (s)	609.1		299.6		260.5		595.2					
Approach LOS	F		F		F		F					

Intersection Summary

HCM Average Control Delay	477.7	HCM Level of Service	F
HCM Volume to Capacity ratio	2.19		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	191.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↑	↑↑↑		↑	↑↑	↑	↑	↑↑	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85	1.00	0.95	
Flt Protected		0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3154		1118	3208		1118	2235	1000	1118	2131	
Flt Permitted		0.72		0.95	1.00		0.14	1.00	1.00	0.32	1.00	
Satd. Flow (perm)		2298		1118	3208		162	2235	1000	375	2131	
Volume (vph)	493	1330	64	232	1504	13	67	497	285	27	931	418
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	519	1400	67	244	1583	14	71	523	300	28	980	440
RTOR Reduction (vph)	0	4	0	0	1	0	0	0	213	0	52	0
Lane Group Flow (vph)	0	1982	0	244	1596	0	71	523	87	28	1368	0
Turn Type		Prot		Prot			Perm		Perm	Perm		
Protected Phases		7	4	3	8			2			6	
Permitted Phases							2		2		6	
Actuated Green, G (s)		36.4		20.9	36.4		28.4	28.4	28.4	28.4	28.4	
Effective Green, g (s)		37.0		22.0	37.0		29.0	29.0	29.0	29.0	29.0	
Actuated g/C Ratio		0.37		0.22	0.37		0.29	0.29	0.29	0.29	0.29	
Clearance Time (s)		4.6		5.1	4.6		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)		3.0		5.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1039		246	1187		47	648	290	109	618	
v/s Ratio Prot		c0.42		0.22	c0.50			0.23			c0.64	
v/s Ratio Perm		c0.29					0.44		0.09	0.07		
v/c Ratio		1.91		0.99	1.34		1.51	0.81	0.30	0.26	2.21	
Uniform Delay, d1		31.5		38.9	31.5		35.5	32.9	27.6	27.2	35.5	
Progression Factor		0.61		0.93	1.39		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		408.8		49.8	159.9		313.0	10.4	2.6	5.6	551.5	
Delay (s)		428.1		85.8	203.6		348.5	43.3	30.2	32.8	587.0	
Level of Service		F		F	F		F	D	C	C	F	
Approach Delay (s)		428.1			188.0			63.1			576.3	
Approach LOS		F			F			E			F	

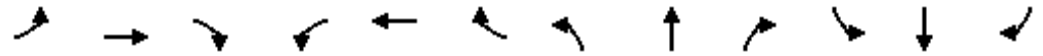
Intersection Summary

HCM Average Control Delay	338.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	193.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.86	0.97	0.88
Frbp, ped/bikes		1.00	0.97	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)		4047	968	2168	4047	2168	1760
Flt Permitted		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)		4047	968	2168	4047	2168	1760
Volume (vph)	0	1584	558	1290	2118	211	459
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1633	575	1330	2184	218	473
RTOR Reduction (vph)	0	0	48	0	0	0	339
Lane Group Flow (vph)	0	1633	527	1330	2184	218	134
Conf. Peds. (#/hr)			33	33			38
Conf. Bikes (#/hr)			14				1
Turn Type	Prot		pm+ov	Prot			Over
Protected Phases	1	6	4	3	2 3	4	3
Permitted Phases			6				
Actuated Green, G (s)		39.0	69.1	35.0	80.0	30.1	35.0
Effective Green, g (s)		41.0	74.0	34.0	79.0	33.0	34.0
Actuated g/C Ratio		0.34	0.62	0.28	0.66	0.28	0.28
Clearance Time (s)		6.0	6.9	3.0		6.9	3.0
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1383	629	614	2664	596	499
v/s Ratio Prot		c0.40	c0.23	c0.61	0.54	0.10	0.08
v/s Ratio Perm			0.31				
v/c Ratio		1.18	0.84	2.17	0.82	0.37	0.27
Uniform Delay, d1		39.5	18.2	43.0	15.2	35.1	33.4
Progression Factor		0.43	1.42	1.00	1.00	1.00	1.00
Incremental Delay, d2		85.1	4.7	530.1	2.1	0.4	0.3
Delay (s)		102.1	30.5	573.1	17.3	35.4	33.6
Level of Service		F	C	F	B	D	C
Approach Delay (s)		83.5			227.7	34.2	
Approach LOS		F			F	C	

Intersection Summary			
HCM Average Control Delay	157.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	124.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘		↖		↖	↑↑↑		↖	↑↑	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0				4.0	4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	0.88				1.00	0.91			0.95	1.00
Frt	1.00	1.00	0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1504	1504	2493				1583	4550			3167	1417
Flt Permitted	0.95	0.95	1.00				0.47	1.00			1.00	1.00
Satd. Flow (perm)	1504	1504	2493				790	4550			3167	1417
Volume (vph)	151	0	125	0	0	0	419	1220	0	0	366	590
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	172	0	142	0	0	0	476	1386	0	0	416	670
RTOR Reduction (vph)	0	0	117	0	0	0	0	0	0	0	0	487
Lane Group Flow (vph)	86	86	25	0	0	0	476	1386	0	0	416	183
Turn Type	Split		custom				pm+pt			Perm		Over
Protected Phases	4	4	7	1		3	5	2			6	4
Permitted Phases							2			6		
Actuated Green, G (s)	16.5	16.5	15.5				46.6	40.6			40.6	16.5
Effective Green, g (s)	17.1	17.1	16.1				47.8	41.8			41.8	17.1
Actuated g/C Ratio	0.19	0.19	0.18				0.53	0.46			0.46	0.19
Clearance Time (s)	4.6	4.6					4.0	5.2			5.2	4.6
Vehicle Extension (s)	3.0	3.0					3.0	3.2			3.4	3.0
Lane Grp Cap (vph)	283	283	441				467	2090			1455	266
v/s Ratio Prot	0.06	0.06	c0.01				c0.07	0.30			0.13	c0.13
v/s Ratio Perm							c0.47					
v/c Ratio	0.30	0.30	0.06				1.02	0.66			0.29	0.69
Uniform Delay, d1	31.8	31.8	31.1				20.3	19.1			15.3	34.5
Progression Factor	1.00	1.00	1.00				1.00	1.00			1.00	1.00
Incremental Delay, d2	2.8	2.8	0.1				46.6	1.7			0.5	13.6
Delay (s)	34.6	34.6	31.2				66.9	20.8			15.8	48.0
Level of Service	C	C	C				E	C			B	D
Approach Delay (s)		33.0			0.0			32.6			35.7	
Approach LOS		C			A			C			D	

Intersection Summary

HCM Average Control Delay	33.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	91.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑		↑↑	↑↑↑		↑↑	↑↑	↑↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.86		0.97	0.91		0.97	0.95	0.88
Frt		1.00	0.85		0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		4550	1417		5606		3072	4459		3072	3167	2493
Flt Permitted		1.00	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		4550	1417		5606		3072	4459		3072	3167	2493
Volume (vph)	0	2023	110	0	2976	515	447	594	91	484	493	406
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	2064	112	0	3037	526	456	606	93	494	503	414
RTOR Reduction (vph)	0	0	51	0	35	0	0	1	0	0	0	3
Lane Group Flow (vph)	0	2064	61	0	3528	0	456	698	0	494	503	411
Turn Type		pm+ov					Prot			Prot		Perm
Protected Phases		6	3		2		3	8		7	4	
Permitted Phases		6										4
Actuated Green, G (s)		35.5	47.5		35.5		12.0	27.7		12.0	27.7	27.7
Effective Green, g (s)		37.0	49.0		37.0		12.0	29.0		12.0	29.0	29.0
Actuated g/C Ratio		0.41	0.54		0.41		0.13	0.32		0.13	0.32	0.32
Clearance Time (s)		5.5	4.0		5.5		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)		4.9	3.0		5.2		3.0	5.1		3.0	5.1	5.1
Lane Grp Cap (vph)		1871	834		2305		410	1437		410	1020	803
v/s Ratio Prot		0.45	0.01		c0.63		0.15	0.16		c0.16	0.16	
v/s Ratio Perm			0.03									c0.16
v/c Ratio		1.10	0.07		1.53		1.11	0.49		1.20	0.49	0.51
Uniform Delay, d1		26.5	9.7		26.5		39.0	24.5		39.0	24.6	24.8
Progression Factor		1.00	1.00		0.33		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		55.1	0.0		239.0		78.5	1.2		113.2	0.8	1.1
Delay (s)		81.6	9.8		247.8		117.5	25.7		152.2	25.4	25.9
Level of Service		F	A		F		F	C		F	C	C
Approach Delay (s)		77.9			247.8		61.9			69.9		
Approach LOS		E			F		E			E		

Intersection Summary

HCM Average Control Delay	147.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	⬇	↑↑↑	↗	↘↘	↑↑↑	↘↘↘	↗↗
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.86	1.00	0.97	0.91	0.94	0.88
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1118	4047	1000	2168	3212	3152	1760
Flt Permitted	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1118	4047	1000	2168	3212	3152	1760
Volume (vph)	8	1704	783	294	1971	314	441
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	8	1721	791	297	1991	317	445
RTOR Reduction (vph)	0	0	500	0	0	0	352
Lane Group Flow (vph)	8	1721	291	297	1991	317	93
Confl. Peds. (#/hr)			55	55		1	207
Confl. Bikes (#/hr)			15				7
Turn Type	Prot		Over	Prot		Over	
Protected Phases	1	6	8	5	2	8	5
Permitted Phases							
Actuated Green, G (s)	1.0	47.3	30.1	25.0	70.3	30.1	25.0
Effective Green, g (s)	2.0	50.0	33.0	25.0	73.0	33.0	25.0
Actuated g/C Ratio	0.02	0.42	0.28	0.21	0.61	0.28	0.21
Clearance Time (s)	5.0	6.7	6.9	4.0	6.7	6.9	4.0
Vehicle Extension (s)	3.0	5.0	3.0	3.0	5.0	3.0	3.0
Lane Grp Cap (vph)	19	1686	275	452	1954	867	367
v/s Ratio Prot	0.01	c0.43	c0.29	0.14	c0.62	0.10	0.05
v/s Ratio Perm							
v/c Ratio	0.42	1.02	1.06	0.66	1.02	0.37	0.25
Uniform Delay, d1	58.4	35.0	43.5	43.6	23.5	35.1	39.7
Progression Factor	0.49	1.37	6.50	1.11	1.38	1.00	1.00
Incremental Delay, d2	1.4	12.8	35.0	2.1	20.8	0.3	0.4
Delay (s)	29.9	60.8	317.8	50.3	53.1	35.3	40.1
Level of Service	C	E	F	D	D	D	D
Approach Delay (s)		141.4			52.8	38.1	
Approach LOS		F			D	D	
Intersection Summary							
HCM Average Control Delay			90.8		HCM Level of Service		F
HCM Volume to Capacity ratio			1.02				
Actuated Cycle Length (s)			120.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization			100.9%		ICU Level of Service		G
Analysis Period (min)			15				
c Critical Lane Group							



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↘↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	0.97	0.91	0.91
Frbp, ped/bikes	1.00	1.00	0.95	1.00	1.00	0.90	1.00	1.00	0.90	1.00	0.92	0.92
Flpb, ped/bikes	0.99	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.90	0.90
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1571	3167	1349	1561	3167	1275	3072	4550	1274	3072	3800	3800
Flt Permitted	0.29	1.00	1.00	0.30	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	475	3167	1349	496	3167	1275	3072	4550	1274	3072	3800	3800
Volume (vph)	102	767	151	258	501	79	258	1261	588	244	118	211
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	115	862	170	290	563	89	290	1417	661	274	133	237
RTOR Reduction (vph)	0	0	73	0	0	59	0	0	49	0	165	0
Lane Group Flow (vph)	115	862	97	290	563	30	290	1417	612	274	205	0
Conf. Peds. (#/hr)	93		51	51		93	90		76	76		90
Conf. Bikes (#/hr)			2						2			5
Turn Type	pm+pt		pm+ov	Perm		Perm	Prot		Perm	Prot		
Protected Phases	1	6	3		2		3	8		7	4	
Permitted Phases	6		6	2		2			8			
Actuated Green, G (s)	38.8	38.8	49.9	28.5	28.5	28.5	11.1	26.2	26.2	11.0	26.1	
Effective Green, g (s)	40.3	40.3	51.4	30.0	30.0	30.0	11.1	26.7	26.7	11.0	26.6	
Actuated g/C Ratio	0.45	0.45	0.57	0.33	0.33	0.33	0.12	0.30	0.30	0.12	0.30	
Clearance Time (s)	3.5	5.5	4.0	5.5	5.5	5.5	4.0	4.5	4.5	4.0	4.5	
Vehicle Extension (s)	3.0	4.0	2.0	4.0	4.0	4.0	2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	289	1418	830	165	1056	425	379	1350	378	375	1123	
v/s Ratio Prot	0.03	c0.27	0.01		0.18		0.09	0.31		c0.09	0.05	
v/s Ratio Perm	0.15		0.06	c0.58		0.02			c0.48			
v/c Ratio	0.40	0.61	0.12	1.76	0.53	0.07	0.77	1.05	1.62	0.73	0.18	
Uniform Delay, d1	15.7	18.9	8.9	30.0	24.3	20.5	38.2	31.6	31.6	38.1	23.6	
Progression Factor	1.47	1.45	4.27	1.00	1.00	1.00	1.03	0.74	0.69	1.00	1.00	
Incremental Delay, d2	0.4	0.4	0.0	364.6	0.7	0.1	5.5	34.5	287.2	6.2	0.4	
Delay (s)	23.6	27.8	37.9	394.6	25.0	20.6	44.9	58.0	309.1	44.3	24.0	
Level of Service	C	C	D	F	C	C	D	E	F	D	C	
Approach Delay (s)		28.9			138.3			126.5			32.6	
Approach LOS		C			F			F			C	

Intersection Summary

HCM Average Control Delay	94.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↘	↑↑↑	↗	↘	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)					4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor					1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frt					1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected					0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)					1583	1417	1583	4550	1417	1583	4550	
Flt Permitted					0.76	1.00	0.39	1.00	1.00	0.07	1.00	
Satd. Flow (perm)					1262	1417	657	4550	1417	115	4550	
Volume (vph)	0	0	0	152	0	287	2	1858	43	16	566	0
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	171	0	322	2	2088	48	18	636	0
RTOR Reduction (vph)	0	0	0	0	0	7	0	0	17	0	0	0
Lane Group Flow (vph)	0	0	0	0	171	315	2	2088	31	18	636	0
Turn Type	Perm			Perm			Perm	Perm	Perm		Perm	
Protected Phases	4			4			4		2		2	
Permitted Phases	4			4			2		2		2	
Actuated Green, G (s)				23.0			23.0	57.0	57.0	57.0	57.0	57.0
Effective Green, g (s)				24.0			24.0	58.0	58.0	58.0	58.0	58.0
Actuated g/C Ratio				0.27			0.27	0.64	0.64	0.64	0.64	0.64
Clearance Time (s)				5.0			5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)				3.0			3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)				337			378	423	2932	913	74	2932
v/s Ratio Prot							c0.46				0.14	
v/s Ratio Perm				0.14			c0.22	0.00	0.02		0.16	
v/c Ratio				0.51			0.83	0.00	0.71		0.03	
Uniform Delay, d1				28.0			31.1	5.7	10.5		5.8	
Progression Factor				1.00			1.00	0.43	0.69		0.36	
Incremental Delay, d2				1.2			14.6	0.0	1.0		0.0	
Delay (s)				29.2			45.7	2.5	8.2		2.1	
Level of Service				C			D	A	A		A	
Approach Delay (s)	0.0			40.0			8.1				5.3	
Approach LOS	A			D			A				A	

Intersection Summary

HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕	↗	↖	↕↕↕		↖↖	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95	0.95	1.00	0.91		0.97	0.91	
Frt		0.92			0.94	0.85	1.00	0.98		1.00	0.97	
Flt Protected		0.98			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2855			1452	1346	1583	4469		3072	4404	
Flt Permitted		0.88			0.86	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2542			1275	1346	1583	4469		3072	4404	
Volume (vph)	5	2	9	87	36	419	57	1441	194	39	549	150
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	6	2	10	99	41	476	65	1638	220	44	624	170
RTOR Reduction (vph)	0	8	0	0	36	2	0	14	0	0	40	0
Lane Group Flow (vph)	0	10	0	0	209	369	65	1844	0	44	754	0
Turn Type	Perm		Perm		pm+ov		Prot		Prot			
Protected Phases	8		4		4	5	1	6	5		2	
Permitted Phases	8		4		4							
Actuated Green, G (s)	19.0				19.0	27.2	7.9	48.6	8.2		48.9	
Effective Green, g (s)	20.5				20.5	28.7	7.9	49.3	8.2		49.6	
Actuated g/C Ratio	0.23				0.23	0.32	0.09	0.55	0.09		0.55	
Clearance Time (s)	5.5				5.5	4.0	4.0	4.7	4.0		4.7	
Vehicle Extension (s)	3.0				3.0	3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	579				290	489	139	2448	280		2427	
v/s Ratio Prot					c0.07		0.04	c0.41	0.01		0.17	
v/s Ratio Perm	0.00				0.16	0.21						
v/c Ratio	0.02				0.72	0.75	0.47	0.75	0.16		0.31	
Uniform Delay, d1	26.9				32.1	27.5	39.0	15.7	37.7		10.9	
Progression Factor	1.00				1.00	1.00	1.38	0.26	0.81		1.63	
Incremental Delay, d2	0.0				8.6	6.5	1.2	1.1	0.3		0.3	
Delay (s)	27.0				40.7	34.0	55.2	5.1	30.7		18.2	
Level of Service	C				D	C	E	A	C		B	
Approach Delay (s)	27.0				36.7		6.8				18.8	
Approach LOS	C				D		A				B	

Intersection Summary

HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔		↔	↔		↔	↔↔	↔↔↔		↔	↔↔↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97		1.00	1.00		1.00	0.97	0.91		1.00	0.91	
Frt	1.00		0.85	1.00		0.85	1.00	1.00		1.00	0.95	
Flt Protected	0.95		1.00	0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3072		1417	1583		1417	3072	4534		1583	4327	
Flt Permitted	0.95		1.00	0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3072		1417	1583		1417	3072	4534		1583	4327	
Volume (vph)	14	0	12	27	0	101	210	1602	38	14	429	209
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	17	0	15	33	0	125	259	1978	47	17	530	258
RTOR Reduction (vph)	0	0	12	0	0	89	0	2	0	0	87	0
Lane Group Flow (vph)	17	0	3	33	0	36	259	2023	0	17	701	0
Turn Type	Prot		custom	Prot		custom	Prot			Prot		
Protected Phases	3		3 5	4		1 4	5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	9.2		19.2	14.9		26.4	10.0	41.4		6.6	38.0	
Effective Green, g (s)	10.1		19.3	15.8		25.6	9.2	42.3		5.8	38.9	
Actuated g/C Ratio	0.11		0.21	0.18		0.28	0.10	0.47		0.06	0.43	
Clearance Time (s)	4.9			4.9			3.2	4.9		3.2	4.9	
Vehicle Extension (s)	3.0			3.0			3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	345		304	278		403	314	2131		102	1870	
v/s Ratio Prot	c0.01		0.00	c0.02		0.03	c0.08	c0.45		0.01	0.16	
v/s Ratio Perm												
v/c Ratio	0.05		0.01	0.12		0.09	0.82	0.95		0.17	0.37	
Uniform Delay, d1	35.7		27.8	31.2		23.6	39.6	22.8		39.8	17.3	
Progression Factor	1.00		1.00	1.00		1.00	1.46	0.56		1.26	0.52	
Incremental Delay, d2	0.1		0.0	0.2		0.1	1.7	1.3		0.7	0.6	
Delay (s)	35.7		27.8	31.4		23.7	59.7	14.2		51.1	9.6	
Level of Service	D		C	C		C	E	B		D	A	
Approach Delay (s)		32.0			25.3			19.4			10.5	
Approach LOS		C			C			B			B	

Intersection Summary

HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↗	↑↑↑	↑↑↑↗		↖↗	↘↙
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.91	0.91		0.97	0.88
Frt	1.00	1.00	0.96		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3072	4550	4378		3072	2493
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3072	4550	4378		3072	2493
Volume (vph)	1322	1732	1580	532	112	227
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1469	1924	1756	591	124	252
RTOR Reduction (vph)	0	0	60	0	0	182
Lane Group Flow (vph)	1469	1924	2287	0	124	70
Turn Type	Prot					Prot
Protected Phases	5	2 5	6		4	4
Permitted Phases						
Actuated Green, G (s)	12.0	55.5	38.5		24.0	24.0
Effective Green, g (s)	13.0	57.0	40.0		25.0	25.0
Actuated g/C Ratio	0.14	0.63	0.44		0.28	0.28
Clearance Time (s)	5.0		5.5		5.0	5.0
Vehicle Extension (s)	2.0		3.0		3.0	3.0
Lane Grp Cap (vph)	444	2882	1946		853	693
v/s Ratio Prot	c0.48	0.42	c0.52		c0.04	0.03
v/s Ratio Perm						
v/c Ratio	3.31	0.67	1.18		0.15	0.10
Uniform Delay, d1	38.5	10.5	25.0		24.5	24.1
Progression Factor	1.00	1.00	1.00		1.36	3.78
Incremental Delay, d2	1044.6	1.2	84.6		0.1	0.1
Delay (s)	1083.1	11.7	109.6		33.5	91.4
Level of Service	F	B	F		C	F
Approach Delay (s)		475.6	109.6		72.3	
Approach LOS		F	F		E	

Intersection Summary

HCM Average Control Delay	310.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	103.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↵	↑↑↑	↵	↑
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	0.97	0.91
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3212	1000	2168	3212	2168	910
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3212	1000	2168	3212	2168	910
Volume (vph)	2480	886	238	1994	352	114
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	2531	904	243	2035	359	116
RTOR Reduction (vph)	0	322	0	0	0	87
Lane Group Flow (vph)	2531	582	243	2035	359	29
Confl. Peds. (#/hr)		59	59		11	
Confl. Bikes (#/hr)		14				
Turn Type		Over	Prot			Perm
Protected Phases	6	4	5	2	4	
Permitted Phases						4
Actuated Green, G (s)	60.1	28.1	16.7	80.8	28.1	28.1
Effective Green, g (s)	61.3	30.0	16.7	82.0	30.0	30.0
Actuated g/C Ratio	0.51	0.25	0.14	0.68	0.25	0.25
Clearance Time (s)	5.2	5.9	4.0	5.2	5.9	5.9
Vehicle Extension (s)	3.7	3.8	1.0	3.5	3.8	3.8
Lane Grp Cap (vph)	1641	250	302	2195	542	228
v/s Ratio Prot	c0.79	c0.58	0.11	c0.63	0.17	
v/s Ratio Perm						0.03
v/c Ratio	1.54	2.33	0.80	0.93	0.66	0.13
Uniform Delay, d1	29.4	45.0	50.1	16.4	40.4	34.9
Progression Factor	1.64	1.60	1.25	0.54	1.00	1.00
Incremental Delay, d2	244.3	599.2	6.5	4.1	6.3	1.1
Delay (s)	292.6	671.1	69.1	13.0	46.7	36.0
Level of Service	F	F	E	B	D	D
Approach Delay (s)	392.2			19.0	44.1	
Approach LOS	F			B	D	

Intersection Summary

HCM Average Control Delay	228.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↖↗	↕	↖	↗	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.88	0.95	1.00	1.00	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3072	2493	3167	1417	1583	4550
Flt Permitted	0.95	1.00	1.00	1.00	0.52	1.00
Satd. Flow (perm)	3072	2493	3167	1417	867	4550
Volume (vph)	66	308	290	439	721	286
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	342	322	488	801	318
RTOR Reduction (vph)	0	297	0	11	0	0
Lane Group Flow (vph)	73	45	322	478	801	318
Turn Type		Perm		pm+ov	pm+pt	
Protected Phases	4		2	4	1	6
Permitted Phases		4		2	6	
Actuated Green, G (s)	11.4	11.4	55.6	67.0	68.6	68.6
Effective Green, g (s)	11.9	11.9	57.1	69.0	70.1	70.1
Actuated g/C Ratio	0.13	0.13	0.63	0.77	0.78	0.78
Clearance Time (s)	4.5	4.5	5.5	4.5	3.0	5.5
Vehicle Extension (s)	3.0	3.0	5.0	3.0	3.0	5.0
Lane Grp Cap (vph)	406	330	2009	1149	747	3544
v/s Ratio Prot	0.02		0.10	c0.05	c0.11	0.07
v/s Ratio Perm		0.02		0.28	c0.73	
v/c Ratio	0.18	0.14	0.16	0.42	1.07	0.09
Uniform Delay, d1	34.7	34.5	6.7	3.6	8.6	2.4
Progression Factor	0.70	1.94	0.11	2.83	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.0	0.0	54.0	0.1
Delay (s)	24.5	67.2	0.8	10.2	62.6	2.4
Level of Service	C	E	A	B	E	A
Approach Delay (s)	59.7		6.5			45.5
Approach LOS	E		A			D

Intersection Summary

HCM Average Control Delay	34.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↗	↑↑↑	↑↑↑	↖	↖↗	↖↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.91	1.00	0.97	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3072	4550	4550	1417	3072	2493
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3072	4550	4550	1417	3072	2493
Volume (vph)	1201	2990	2095	209	16	112
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1238	3082	2160	215	16	115
RTOR Reduction (vph)	0	0	0	112	0	0
Lane Group Flow (vph)	1238	3082	2160	103	16	115
Turn Type	Prot			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)	15.0	55.1	36.1	36.1	25.0	25.0
Effective Green, g (s)	15.0	56.3	37.3	37.3	25.7	25.7
Actuated g/C Ratio	0.17	0.63	0.41	0.41	0.29	0.29
Clearance Time (s)	4.0	5.2	5.2	5.2	4.7	4.7
Vehicle Extension (s)	3.0	4.8	4.6	4.6	3.0	3.0
Lane Grp Cap (vph)	512	2846	1886	587	877	712
v/s Ratio Prot	c0.40	c0.68	0.47		0.01	
v/s Ratio Perm				0.07		c0.05
v/c Ratio	2.42	1.08	1.15	0.17	0.02	0.16
Uniform Delay, d1	37.5	16.9	26.4	16.6	23.1	24.1
Progression Factor	1.54	0.74	1.00	1.00	0.89	0.93
Incremental Delay, d2	638.6	38.0	72.2	0.6	0.0	0.1
Delay (s)	696.4	50.5	98.5	17.3	20.7	22.5
Level of Service	F	D	F	B	C	C
Approach Delay (s)		235.6	91.2		22.2	
Approach LOS		F	F		C	

Intersection Summary

HCM Average Control Delay	181.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4550	1417	1583	4528		1583	3109		1583	3110	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.13	1.00		0.15	1.00	
Satd. Flow (perm)	1583	4550	1417	1583	4528		215	3109		247	3110	
Volume (vph)	138	2232	396	121	2720	90	178	981	136	141	1019	139
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	139	2255	400	122	2747	91	180	991	137	142	1029	140
RTOR Reduction (vph)	0	0	154	0	3	0	0	9	0	0	9	0
Lane Group Flow (vph)	139	2255	246	122	2835	0	180	1119	0	142	1160	0
Turn Type	Prot		Perm	Prot		pm+pt				Perm		
Protected Phases	1	6		5	2		3	8				4
Permitted Phases			6				8			4		
Actuated Green, G (s)	13.3	53.6	53.6	12.4	52.7		40.0	40.0		26.0	26.0	
Effective Green, g (s)	13.3	54.6	54.6	12.4	53.7		41.0	41.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.46	0.46	0.10	0.45		0.34	0.34		0.22	0.22	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		3.5	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	175	2070	645	164	2026		187	1062		56	700	
v/s Ratio Prot	c0.09	0.50		0.08	c0.63		0.08	c0.36			0.37	
v/s Ratio Perm			0.17				0.25			c0.58		
v/c Ratio	0.79	1.09	0.38	0.74	1.40		0.96	1.05		2.54	1.66	
Uniform Delay, d1	52.0	32.7	21.6	52.3	33.1		56.9	39.5		46.5	46.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.49	1.41		1.00	1.00	
Incremental Delay, d2	20.2	48.9	1.7	14.7	182.8		12.1	26.8		740.6	302.4	
Delay (s)	72.2	81.6	23.3	67.0	216.0		96.9	82.3		787.1	348.9	
Level of Service	E	F	C	E	F		F	F		F	F	
Approach Delay (s)		72.8			209.8			84.3			396.3	
Approach LOS		E			F			F			F	

Intersection Summary

HCM Average Control Delay	173.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	130.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕↕↕	↖	↖↗	↕↕↕	↖	↖↗	↕↕	↖	↖↗	↕↕	↖
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3212	1000	2168	3212	1000	2168	2235	1000	2168	2235	1000
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2168	3212	1000	2168	3212	1000	2168	2235	1000	2168	2235	1000
Volume (vph)	75	2431	161	42	2027	249	102	1045	180	712	1254	126
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	77	2481	164	43	2068	254	104	1066	184	727	1280	129
RTOR Reduction (vph)	0	0	58	0	0	32	0	0	109	0	0	61
Lane Group Flow (vph)	77	2481	106	43	2068	222	104	1066	75	727	1280	68
Turn Type	Prot		Perm	Prot		pm+ov	Prot		Perm	Prot		Perm
Protected Phases	1	6		5	2	7	3	8		7		4
Permitted Phases			6			2			8			4
Actuated Green, G (s)	6.3	29.7	29.7	8.8	32.2	54.2	9.7	39.6	39.6	22.0	51.9	51.9
Effective Green, g (s)	6.3	31.2	31.2	8.8	33.7	55.7	9.7	42.0	42.0	22.0	54.3	54.3
Actuated g/C Ratio	0.05	0.26	0.26	0.07	0.28	0.46	0.08	0.35	0.35	0.18	0.45	0.45
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5	4.0	4.0	6.4	6.4	4.0	6.4	6.4
Vehicle Extension (s)	2.0	4.5	4.5	2.0	5.2	2.0	2.0	4.7	4.7	2.0	4.7	4.7
Lane Grp Cap (vph)	114	835	260	159	902	464	175	782	350	397	1011	453
v/s Ratio Prot	0.04	c0.77		0.02	c0.64	0.09	0.05	c0.48		c0.34	0.57	
v/s Ratio Perm			0.11			0.13			0.08			0.07
v/c Ratio	0.68	2.97	0.41	0.27	2.29	0.48	0.59	1.36	0.22	1.83	1.27	0.15
Uniform Delay, d1	55.8	44.4	36.7	52.6	43.1	22.2	53.3	39.0	27.4	49.0	32.9	19.3
Progression Factor	1.21	1.62	2.49	0.90	0.93	0.67	1.00	1.00	1.00	0.77	0.65	0.09
Incremental Delay, d2	1.1	887.4	0.4	0.1	583.2	0.1	3.6	171.7	0.6	377.6	122.7	0.1
Delay (s)	68.8	959.2	91.8	47.6	623.3	15.0	56.8	210.7	28.0	415.1	143.9	1.9
Level of Service	E	F	F	D	F	B	E	F	C	F	F	A
Approach Delay (s)		881.8			547.5			174.0			227.6	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	514.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	162.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.86		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	5732		1583	3167	1417	1583	3167	1417
Flt Permitted	0.12	1.00	1.00	0.12	1.00		0.26	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	198	4550	1417	202	5732		437	3167	1417	215	3167	1417
Volume (vph)	328	3297	137	30	2430	5	82	902	262	311	912	325
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	331	3330	138	30	2455	5	83	911	265	314	921	328
RTOR Reduction (vph)	0	0	50	0	0	0	0	0	4	0	0	0
Lane Group Flow (vph)	331	3330	88	30	2460	0	83	911	261	314	921	328
Turn Type	pm+pt		Perm	pm+pt		Perm		pm+ov	pm+pt		pm+ov	
Protected Phases	1	6		5	2			8	5	7	4	1
Permitted Phases	6		6	2		8	8	8	4			4
Actuated Green, G (s)	40.1	33.1	33.1	38.9	32.5	25.5	25.5	31.9	36.5	36.5	43.5	
Effective Green, g (s)	40.6	33.6	33.6	39.4	33.0	27.0	27.0	33.4	38.0	38.0	45.0	
Actuated g/C Ratio	0.45	0.37	0.37	0.44	0.37	0.30	0.30	0.37	0.42	0.42	0.50	
Clearance Time (s)	4.0	4.5	4.5	4.0	4.5	5.5	5.5	4.0	4.0	5.5	4.0	
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	5.0	3.0	3.0	5.0	3.0	
Lane Grp Cap (vph)	197	1699	529	187	2102	131	950	589	197	1337	771	
v/s Ratio Prot	c0.13	c0.73		0.01	0.43		0.29	0.03	c0.12	0.29	0.03	
v/s Ratio Perm	0.63		0.06	0.06		0.19		0.15	c0.55		0.20	
v/c Ratio	1.68	1.96	0.17	0.16	1.17	0.63	0.96	0.44	1.59	0.69	0.43	
Uniform Delay, d1	43.7	28.2	18.8	20.5	28.5	27.2	31.0	21.3	21.9	21.2	14.3	
Progression Factor	1.62	0.65	0.20	0.28	0.31	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	308.1	432.2	0.1	0.0	77.2	13.1	20.1	0.5	289.9	1.9	0.4	
Delay (s)	378.8	450.5	3.9	5.8	85.9	40.3	51.1	21.8	311.8	23.1	14.7	
Level of Service	F	F	A	A	F	D	D	C	F	C	B	
Approach Delay (s)		428.0			84.9		44.2				79.3	
Approach LOS		F			F		D				E	

Intersection Summary

HCM Average Control Delay	221.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	135.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↖		↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.99	1.00		0.99	
Satd. Flow (prot)	1583	3061		1583	3158		1504	1575	1417		1641	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.99	1.00		0.99	
Satd. Flow (perm)	1583	3061		1583	3158		1504	1575	1417		1641	
Volume (vph)	22	983	281	656	1299	24	193	164	122	35	156	10
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	1092	312	729	1443	27	214	182	136	39	173	11
RTOR Reduction (vph)	0	21	0	0	1	0	0	0	84	0	0	0
Lane Group Flow (vph)	24	1383	0	729	1469	0	193	203	52	0	223	0
Turn Type	Prot		Prot		Split		pm+ov		Split			
Protected Phases	1	6		5	2		3	3	5		4	4
Permitted Phases									3			
Actuated Green, G (s)	3.6	36.1		36.2	68.7		10.0	10.0	46.2		20.0	
Effective Green, g (s)	2.6	36.9		35.2	69.5		10.9	10.9	46.1		21.0	
Actuated g/C Ratio	0.02	0.31		0.29	0.58		0.09	0.09	0.38		0.18	
Clearance Time (s)	3.0	4.8		3.0	4.8		4.9	4.9	3.0		5.0	
Vehicle Extension (s)	3.0	6.0		3.0	6.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	34	941		464	1829		137	143	592		287	
v/s Ratio Prot	0.02	c0.45		c0.46	0.47		0.13	c0.13	0.03		c0.14	
v/s Ratio Perm									0.01			
v/c Ratio	0.71	1.47		1.57	0.80		1.41	1.42	0.09		0.78	
Uniform Delay, d1	58.3	41.5		42.4	19.9		54.5	54.5	23.6		47.3	
Progression Factor	0.82	0.86		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	5.9	211.7		267.3	3.9		221.5	224.6	0.1		12.4	
Delay (s)	53.5	247.3		309.7	23.7		276.1	279.2	23.6		59.7	
Level of Service	D	F		F	C		F	F	C		E	
Approach Delay (s)		244.1			118.5			212.7			59.7	
Approach LOS		F			F			F			E	

Intersection Summary

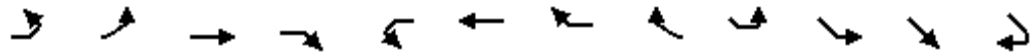
HCM Average Control Delay	167.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	117.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖		↖	↖		↖	↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.90		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1504	1513	1417	1583	1497		1583	1657		1583	1667	1417
Flt Permitted	0.72	0.70	1.00	0.95	1.00		0.23	1.00		0.26	1.00	1.00
Satd. Flow (perm)	1138	1106	1417	1583	1497		384	1657		434	1667	1417
Volume (vph)	258	10	36	17	19	39	80	528	21	54	582	312
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	263	10	37	17	19	40	82	539	21	55	594	318
RTOR Reduction (vph)	0	0	32	0	30	0	0	2	0	0	0	174
Lane Group Flow (vph)	132	141	5	17	29	0	82	558	0	55	594	144
Turn Type	Perm		Perm	Split			Perm			Perm		Perm
Protected Phases		4		3	3			2			2	
Permitted Phases	4		4				2			2		2
Actuated Green, G (s)	10.0	10.0	10.0	17.0	17.0		32.6	32.6		32.6	32.6	32.6
Effective Green, g (s)	11.0	11.0	11.0	18.0	18.0		34.0	34.0		34.0	34.0	34.0
Actuated g/C Ratio	0.15	0.15	0.15	0.24	0.24		0.45	0.45		0.45	0.45	0.45
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.4	5.4		5.4	5.4	5.4
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	167	162	208	380	359		174	751		197	756	642
v/s Ratio Prot				0.01	c0.02			0.34			c0.36	
v/s Ratio Perm	0.12	c0.13	0.00				0.21			0.13		0.10
v/c Ratio	0.79	0.87	0.03	0.04	0.08		0.47	0.74		0.28	0.79	0.22
Uniform Delay, d1	30.9	31.3	27.4	21.9	22.1		14.3	16.9		12.8	17.4	12.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	22.0	36.4	0.1	0.2	0.4		8.9	6.6		3.5	8.1	0.8
Delay (s)	52.8	67.7	27.5	22.1	22.5		23.1	23.5		16.3	25.5	13.3
Level of Service	D	E	C	C	C		C	C		B	C	B
Approach Delay (s)		56.6			22.4			23.4			20.9	
Approach LOS		E			C			C			C	

Intersection Summary

HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	SEL2	SEL	SET	SER
Lane Configurations			↕	↗		↕↗				↘	↕↗	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1700	1700	1700	1700	1700
Total Lost time (s)			4.0	4.0		4.0				4.0	4.0	
Lane Util. Factor			1.00	1.00		0.95				1.00	0.95	
Frt			1.00	0.85		0.99				1.00	0.99	
Flt Protected			0.99	1.00		0.98				0.95	1.00	
Satd. Flow (prot)			1163	1000		2161				1583	3131	
Flt Permitted			0.75	1.00		0.66				0.46	1.00	
Satd. Flow (perm)			885	1000		1461				765	3131	
Volume (vph)	19	55	250	17	278	341	41	20	4	34	289	23
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	20	57	258	18	287	352	42	21	4	35	298	24
RTOR Reduction (vph)	0	0	0	9	0	3	0	0	0	0	8	0
Lane Group Flow (vph)	0	0	335	9	0	699	0	0	0	39	314	0
Turn Type		Perm		Perm	Perm				Perm	Perm		
Protected Phases			6			2					4	
Permitted Phases		6		6	2				4	4		
Actuated Green, G (s)			34.0	34.0		34.0				30.0	30.0	
Effective Green, g (s)			36.0	36.0		36.0				31.0	31.0	
Actuated g/C Ratio			0.48	0.48		0.48				0.41	0.41	
Clearance Time (s)			6.0	6.0		6.0				5.0	5.0	
Vehicle Extension (s)			3.0	3.0		3.0				3.0	3.0	
Lane Grp Cap (vph)			425	480		701				316	1294	
v/s Ratio Prot											0.10	
v/s Ratio Perm			0.38	0.01		c0.48				0.05		
v/c Ratio			0.79	0.02		1.04dl				0.12	0.24	
Uniform Delay, d1			16.3	10.2		19.4				13.6	14.3	
Progression Factor			1.04	1.50		1.00				1.00	1.00	
Incremental Delay, d2			11.3	0.1		33.3				0.8	0.4	
Delay (s)			28.3	15.4		52.7				14.4	14.8	
Level of Service			C	B		D				B	B	
Approach Delay (s)			27.7			52.7					14.7	
Approach LOS			C			D					B	

Intersection Summary

HCM Average Control Delay	28.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	117.8%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	NWL	NWT	NWR	NWR2
Lane Configurations				
Ideal Flow (vphpl)	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	
Satd. Flow (prot)	1583	1667	1417	
Flt Permitted	0.55	1.00	1.00	
Satd. Flow (perm)	911	1667	1417	
Volume (vph)	61	316	174	375
Peak-hour factor, PHF	0.97	0.97	0.97	0.97
Adj. Flow (vph)	63	326	179	387
RTOR Reduction (vph)	0	0	104	0
Lane Group Flow (vph)	63	326	462	0
Turn Type	Perm		Perm	
Protected Phases		8		
Permitted Phases	8		8	
Actuated Green, G (s)	30.0	30.0	30.0	
Effective Green, g (s)	31.0	31.0	31.0	
Actuated g/C Ratio	0.41	0.41	0.41	
Clearance Time (s)	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	
Lane Grp Cap (vph)	377	689	586	
v/s Ratio Prot		0.20		
v/s Ratio Perm	0.07		c0.33	
v/c Ratio	0.17	0.47	0.79	
Uniform Delay, d1	13.9	16.0	19.1	
Progression Factor	0.94	0.91	0.93	
Incremental Delay, d2	0.1	0.2	1.0	
Delay (s)	13.2	14.9	18.9	
Level of Service	B	B	B	
Approach Delay (s)		17.1		
Approach LOS		B		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		1.00	0.86			1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.98			0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	1.00
Satd. Flow (prot)	2168	3976		1118	3961			1148		1118	1176	1000
Flt Permitted	0.95	1.00		0.05	1.00			0.91		0.24	1.00	1.00
Satd. Flow (perm)	2168	3976		54	3961			1046		278	1176	1000
Volume (vph)	205	2366	312	96	2579	426	9	254	53	50	290	230
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	207	2390	315	97	2605	430	9	257	54	51	293	232
RTOR Reduction (vph)	0	16	0	0	13	0	0	5	0	0	0	0
Lane Group Flow (vph)	207	2689	0	97	3022	0	0	315	0	51	293	232
Turn Type	Prot		Perm			Perm			Perm		pm+ov	
Protected Phases	5	2			6			4			4	5
Permitted Phases				6			4			4		4
Actuated Green, G (s)	18.6	109.0		86.4	86.4			32.0		32.0	32.0	50.6
Effective Green, g (s)	18.6	109.0		86.4	86.4			33.0		33.0	33.0	51.6
Actuated g/C Ratio	0.12	0.73		0.58	0.58			0.22		0.22	0.22	0.34
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0		5.0	5.0	4.0
Vehicle Extension (s)	1.5	4.0		4.0	4.0			3.0		3.0	3.0	1.5
Lane Grp Cap (vph)	269	2889		31	2282			230		61	259	371
v/s Ratio Prot	0.10	c0.68			0.76						0.25	0.08
v/s Ratio Perm				c1.78				c0.30		0.18		0.15
v/c Ratio	0.77	0.93		3.13	1.32			1.37		0.84	1.13	0.63
Uniform Delay, d1	63.6	17.3		31.8	31.8			58.5		55.9	58.5	41.1
Progression Factor	1.39	0.50		1.00	1.00			1.00		1.09	1.09	0.95
Incremental Delay, d2	1.1	0.7		1036.9	149.0			192.1		51.8	90.5	1.9
Delay (s)	89.8	9.3		1068.7	180.8			250.6		112.5	154.2	40.8
Level of Service	F	A		F	F			F		F	F	D
Approach Delay (s)		15.1			208.3			250.6			104.8	
Approach LOS		B			F			F			F	

Intersection Summary

HCM Average Control Delay	120.6	HCM Level of Service	F
HCM Volume to Capacity ratio	2.42		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	135.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕	↗	↖	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00	0.57	1.00	1.00	0.88
Flpb, ped/bikes	0.96	1.00		0.99	1.00		0.94	1.00	1.00	0.74	1.00	1.00
Frt	1.00	0.95		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	1548		1569	1651		1495	3167	801	1176	3167	1248
Flt Permitted	0.62	1.00		0.45	1.00		0.45	1.00	1.00	0.44	1.00	1.00
Satd. Flow (perm)	986	1548		739	1651		709	3167	801	546	3167	1248
Volume (vph)	99	169	96	187	214	10	45	435	145	39	423	59
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	101	172	98	191	218	10	46	444	148	40	432	60
RTOR Reduction (vph)	0	28	0	0	2	0	0	0	81	0	0	38
Lane Group Flow (vph)	101	242	0	191	226	0	46	444	67	40	432	22
Conf. Peds. (#/hr)	66		43	43		66	111		339	339		111
Conf. Bikes (#/hr)			4			6			18			1
Turn Type	Perm			pm+pt			Perm		pm+ov	Perm		Perm
Protected Phases		6		5	2			8	5		4	
Permitted Phases	6			2			8	8	4			4
Actuated Green, G (s)	27.6	27.6		37.6	37.6		27.0	27.0	33.5	27.0	27.0	27.0
Effective Green, g (s)	29.0	29.0		39.0	39.0		28.0	28.0	34.0	28.0	28.0	28.0
Actuated g/C Ratio	0.39	0.39		0.52	0.52		0.37	0.37	0.45	0.37	0.37	0.37
Clearance Time (s)	5.4	5.4		3.5	5.4		5.0	5.0	3.5	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	381	599		451	859		265	1182	406	204	1182	466
v/s Ratio Prot		0.16		c0.03	0.14			c0.14	0.01		0.14	
v/s Ratio Perm	0.10			c0.19			0.06		0.07	0.07		0.02
v/c Ratio	0.27	0.40		0.42	0.26		0.17	0.38	0.17	0.20	0.37	0.05
Uniform Delay, d1	15.7	16.7		10.4	10.0		15.7	17.1	12.1	15.9	17.1	15.0
Progression Factor	1.12	1.15		1.00	1.00		1.82	1.85	4.62	1.00	1.00	1.00
Incremental Delay, d2	1.6	2.0		0.6	0.7		1.3	0.8	0.2	2.1	0.9	0.2
Delay (s)	19.2	21.3		11.0	10.8		29.9	32.4	56.1	18.0	17.9	15.2
Level of Service	B	C		B	B		C	C	E	B	B	B
Approach Delay (s)		20.7			10.9			37.7			17.6	
Approach LOS		C			B			D			B	

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↕			↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	1.00
Frbp, ped/bikes		1.00	1.00		0.96		1.00	0.94			1.00	0.30
Flpb, ped/bikes		0.93	1.00		0.92		0.80	1.00			0.94	1.00
Frt		1.00	0.85		0.98		1.00	0.99			1.00	0.85
Flt Protected		0.99	1.00		0.99		0.95	1.00			0.99	1.00
Satd. Flow (prot)		1527	1417		1439		1274	2957			2946	420
Flt Permitted		0.87	1.00		0.93		0.28	1.00			0.61	1.00
Satd. Flow (perm)		1352	1417		1349		379	2957			1823	420
Volume (vph)	56	136	32	31	124	20	102	590	50	183	530	55
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	60	146	34	33	133	22	110	634	54	197	570	59
RTOR Reduction (vph)	0	0	34	0	1	0	0	3	0	0	0	8
Lane Group Flow (vph)	0	206	0	0	187	0	110	685	0	0	767	51
Conf. Peds. (#/hr)	570		715	715		570	814		795	795		814
Conf. Bikes (#/hr)			9			12			43			28
Turn Type	Perm		NA	Perm			Perm			Perm		Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		2
Actuated Green, G (s)		30.5	0.0		30.5		34.1	34.1			34.1	34.1
Effective Green, g (s)		32.0	0.0		32.0		35.0	35.0			35.0	35.0
Actuated g/C Ratio		0.43	0.00		0.43		0.47	0.47			0.47	0.47
Clearance Time (s)		5.5			5.5		4.9	4.9			4.9	4.9
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		577	0		576		177	1380			851	196
v/s Ratio Prot								0.23				
v/s Ratio Perm		c0.15			0.14		0.29				c0.42	0.12
v/c Ratio		0.36	0.00		0.33		0.62	0.50			1.02dl	0.26
Uniform Delay, d1		14.5	37.5		14.3		15.0	13.9			18.4	12.1
Progression Factor		1.00	1.00		1.00		1.00	1.00			0.94	0.90
Incremental Delay, d2		1.7	0.0		1.5		15.3	1.3			14.0	3.1
Delay (s)		16.3	37.5		15.8		30.3	15.2			31.3	13.9
Level of Service		B	D		B		C	B			C	B
Approach Delay (s)		19.3			15.8			17.3			30.0	
Approach LOS		B			B			B			C	

Intersection Summary

HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.2%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕	↗		↕↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor		0.95			0.95			0.95	1.00		0.95	
Frbp, ped/bikes		0.83			0.97			1.00	0.67		0.98	
Flpb, ped/bikes		0.99			0.92			1.00	1.00		1.00	
Frt		0.92			0.99			1.00	0.85		0.99	
Flt Protected		1.00			0.98			1.00	1.00		1.00	
Satd. Flow (prot)		1694			1930			2235	668		2186	
Flt Permitted		0.90			0.62			1.00	1.00		0.93	
Satd. Flow (perm)		1536			1231			2235	668		2041	
Volume (vph)	24	157	206	225	185	33	0	935	268	9	454	20
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	24	160	210	230	189	34	0	954	273	9	463	20
RTOR Reduction (vph)	0	25	0	0	4	0	0	0	105	0	2	0
Lane Group Flow (vph)	0	369	0	0	449	0	0	954	168	0	490	0
Confl. Peds. (#/hr)	138		216	216		138	330		211	211		330
Confl. Bikes (#/hr)			2			2			16			3
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		
Actuated Green, G (s)		68.5			68.5			71.0	71.0			71.0
Effective Green, g (s)		70.0			70.0			72.0	72.0			72.0
Actuated g/C Ratio		0.47			0.47			0.48	0.48			0.48
Clearance Time (s)		5.5			5.5			5.0	5.0			5.0
Vehicle Extension (s)		3.0			3.0			3.0	3.0			3.0
Lane Grp Cap (vph)		717			574			1073	321			980
v/s Ratio Prot								c0.43				
v/s Ratio Perm		0.24			c0.36				0.25			0.24
v/c Ratio		0.52			1.03dl			0.89	0.52			0.50
Uniform Delay, d1		28.1			33.6			35.4	27.1			26.7
Progression Factor		0.73			1.34			1.56	3.19			1.00
Incremental Delay, d2		0.2			5.9			1.2	0.6			1.8
Delay (s)		20.7			50.8			56.3	87.0			28.5
Level of Service		C			D			E	F			C
Approach Delay (s)		20.7			50.8			63.1				28.5
Approach LOS		C			D			E				C

Intersection Summary

HCM Average Control Delay	47.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑		↔↔	↑↑↑		↔	↑↑↑		↔	↑↑↑	↔
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		0.97	0.86		1.00	0.91		1.00	0.86	0.86
Frbp, ped/bikes	1.00	0.94		1.00	0.99		1.00	0.92		1.00	1.00	0.85
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		0.91	1.00	1.00
Frt	1.00	0.97		1.00	0.99		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	2168	3694		2168	3960		1097	2862		1022	3035	729
Flt Permitted	0.95	1.00		0.95	1.00		0.22	1.00		0.27	1.00	1.00
Satd. Flow (perm)	2168	3694		2168	3960		258	2862		290	3035	729
Volume (vph)	419	2712	672	225	2498	121	490	634	196	57	543	270
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	441	2855	707	237	2629	127	516	667	206	60	572	284
RTOR Reduction (vph)	0	29	0	0	4	0	0	37	0	0	0	0
Lane Group Flow (vph)	441	3533	0	237	2752	0	516	836	0	60	572	284
Conf. Peds. (#/hr)	222		162	162		222	210		241	241		210
Conf. Bikes (#/hr)			3			2			13			5
Turn Type	Prot			Prot			pm+pt			Perm		pm+ov
Protected Phases	5	2		1	6		3	8			4	4
Permitted Phases							8			4		4
Actuated Green, G (s)	32.9	77.4		13.0	57.5		44.2	44.2		30.2	30.2	63.1
Effective Green, g (s)	32.9	78.9		13.0	59.0		46.1	46.1		32.1	32.1	65.0
Actuated g/C Ratio	0.22	0.53		0.09	0.39		0.31	0.31		0.21	0.21	0.43
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	5.9		5.9	5.9	4.0
Vehicle Extension (s)	2.0	4.0		2.0	4.0		3.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	476	1943		188	1558		135	880		62	649	335
v/s Ratio Prot	0.20	c0.96		0.11	c0.69		c0.25	0.29			0.19	0.19
v/s Ratio Perm							c0.92			0.21		0.20
v/c Ratio	0.93	1.82		1.26	1.77		3.82	0.95		0.97	0.88	0.85
Uniform Delay, d1	57.4	35.5		68.5	45.5		48.2	50.8		58.4	57.1	38.1
Progression Factor	1.28	1.14		0.81	0.71		1.00	1.00		1.00	1.00	1.21
Incremental Delay, d2	3.3	368.3		121.3	345.0		1287.8	18.8		91.5	11.1	14.5
Delay (s)	76.6	408.9		176.9	377.6		1336.0	69.6		150.1	68.0	60.5
Level of Service	E	F		F	F		F	E		F	E	E
Approach Delay (s)		372.3			361.7			540.1			71.0	
Approach LOS		F			F			F			E	

Intersection Summary

HCM Average Control Delay	364.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.41		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	173.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.97			0.92		1.00	0.95		1.00	1.00	
Flt Protected		0.97			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1112			1065		1118	2128		1118	2227	
Flt Permitted		0.61			0.79		0.20	1.00		0.15	1.00	
Satd. Flow (perm)		699			854		240	2128		181	2227	
Volume (vph)	134	49	48	185	17	273	42	1205	564	398	883	21
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	138	51	49	191	18	281	43	1242	581	410	910	22
RTOR Reduction (vph)	0	15	0	0	12	0	0	92	0	0	3	0
Lane Group Flow (vph)	0	223	0	0	478	0	43	1731	0	410	929	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		25.0			25.0		25.6	25.6		25.6	25.6	
Effective Green, g (s)		26.0			26.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio		0.43			0.43		0.43	0.43		0.43	0.43	
Clearance Time (s)		5.0			5.0		4.4	4.4		4.4	4.4	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		303			370		104	922		78	965	
v/s Ratio Prot								0.81			0.42	
v/s Ratio Perm		0.32			c0.56		0.18			c2.27		
v/c Ratio		0.73			1.29		0.41	1.88		5.26	0.96	
Uniform Delay, d1		14.1			17.0		11.7	17.0		17.0	16.5	
Progression Factor		1.00			1.00		0.26	0.17		1.00	1.00	
Incremental Delay, d2		8.9			149.7		1.1	395.0		1943.5	21.3	
Delay (s)		23.1			166.7		4.1	397.9		1960.5	37.8	
Level of Service		C			F		A	F		F	D	
Approach Delay (s)		23.1			166.7			388.8			625.2	
Approach LOS		C			F			F			F	

Intersection Summary

HCM Average Control Delay	419.6	HCM Level of Service	F
HCM Volume to Capacity ratio	3.26		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	174.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	1122		1118	1161		1118	2221		1118	2216	
Flt Permitted	0.35	1.00		0.34	1.00		0.16	1.00		0.15	1.00	
Satd. Flow (perm)	411	1122		395	1161		194	2221		174	2216	
Volume (vph)	166	308	136	63	393	38	103	1549	71	22	952	58
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	173	321	142	66	409	40	107	1614	74	23	992	60
RTOR Reduction (vph)	0	27	0	0	5	0	0	6	0	0	7	0
Lane Group Flow (vph)	173	436	0	66	444	0	107	1683	0	23	1045	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		4		4		2		2		2	
Permitted Phases	4		4		2		2		2		2	
Actuated Green, G (s)	23.4	23.4		23.4	23.4		26.5	26.5		26.5	26.5	
Effective Green, g (s)	25.0	25.0		25.0	25.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.45	0.45		0.45	0.45	
Clearance Time (s)	5.6	5.6		5.6	5.6		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	171	468		165	484		87	999		78	997	
v/s Ratio Prot		0.39			0.38			c0.76			0.47	
v/s Ratio Perm	c0.42			0.17			0.55			0.13		
v/c Ratio	1.01	0.93		0.40	0.92		1.23	1.68		0.29	1.05	
Uniform Delay, d1	17.5	16.7		12.2	16.5		16.5	16.5		10.5	16.5	
Progression Factor	0.58	0.53		1.00	1.00		2.30	2.42		0.48	0.58	
Incremental Delay, d2	23.6	3.8		1.6	22.2		126.0	309.0		0.9	24.7	
Delay (s)	33.7	12.6		13.8	38.8		163.9	348.9		5.9	34.3	
Level of Service	C	B		B	D		F	F		A	C	
Approach Delay (s)		18.3			35.6			337.9			33.7	
Approach LOS		B			D			F			C	

Intersection Summary

HCM Average Control Delay	167.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	144.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔↔	↔↔↔	↔		↔↔	↔↔↔	↔	↔	↔↔		↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		0.97	0.91	1.00		0.97	0.91	1.00	1.00	0.95		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		3072	4550	1417		3072	4550	1417	1583	3153		1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (perm)		3072	4550	1417		3072	4550	1417	1583	3153		1583
Volume (vph)	2	126	2519	107	49	159	2156	322	144	1298	39	211
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	2	130	2597	110	51	164	2223	332	148	1338	40	218
RTOR Reduction (vph)	0	0	0	37	0	0	0	79	0	2	0	0
Lane Group Flow (vph)	0	132	2597	73	0	215	2223	253	148	1376	0	218
Turn Type	Prot	Prot	pm+ov		Prot	Prot	pm+ov		Prot			Prot
Protected Phases	1	1	6	3	5	5	2	7	3	8		7
Permitted Phases			6				2					
Actuated Green, G (s)		10.5	31.8	43.8		13.7	35.0	47.0	12.0	42.3		12.0
Effective Green, g (s)		10.5	33.3	45.3		13.7	36.5	48.5	12.0	45.0		12.0
Actuated g/C Ratio		0.09	0.28	0.38		0.11	0.30	0.40	0.10	0.38		0.10
Clearance Time (s)		4.0	5.5	4.0		4.0	5.5	4.0	4.0	6.7		4.0
Vehicle Extension (s)		3.0	5.0	3.0		3.0	5.0	3.0	3.0	4.0		3.0
Lane Grp Cap (vph)		269	1263	582		351	1384	620	158	1182		158
v/s Ratio Prot		0.04	c0.57	0.01		c0.07	c0.49	0.04	0.09	c0.44		c0.14
v/s Ratio Perm				0.04				0.14				
v/c Ratio		0.49	2.06	0.13		0.61	1.61	0.41	0.94	1.16		1.38
Uniform Delay, d1		52.2	43.4	24.4		50.6	41.8	25.5	53.6	37.5		54.0
Progression Factor		0.58	1.29	2.68		0.46	0.89	1.47	1.00	1.00		1.03
Incremental Delay, d2		0.1	475.5	0.0		0.3	273.1	0.0	52.6	83.5		183.1
Delay (s)		30.2	531.6	65.4		23.6	310.2	37.5	106.2	121.0		238.6
Level of Service		C	F	E		C	F	D	F	F		F
Approach Delay (s)		490.2			255.3			119.5				
Approach LOS		F			F			F				

Intersection Summary

HCM Average Control Delay	281.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.46		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	128.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Ideal Flow (vphpl)	1700	1700
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3167	1417
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3167	1417
Volume (vph)	898	110
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	926	113
RTOR Reduction (vph)	0	71
Lane Group Flow (vph)	926	42
Turn Type		Perm
Protected Phases	4	
Permitted Phases		4
Actuated Green, G (s)	42.3	42.3
Effective Green, g (s)	45.0	45.0
Actuated g/C Ratio	0.38	0.38
Clearance Time (s)	6.7	6.7
Vehicle Extension (s)	4.0	4.0
Lane Grp Cap (vph)	1188	531
v/s Ratio Prot	0.29	
v/s Ratio Perm		0.03
v/c Ratio	0.78	0.08
Uniform Delay, d1	33.1	24.2
Progression Factor	0.86	1.43
Incremental Delay, d2	1.1	0.0
Delay (s)	29.6	34.5
Level of Service	C	C
Approach Delay (s)	66.3	
Approach LOS	E	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.86		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4535		1583	5681		1583	3105		1583	3144	
Flt Permitted	0.14	1.00		0.12	1.00		0.22	1.00		0.13	1.00	
Satd. Flow (perm)	225	4535		198	5681		360	3105		215	3144	
Volume (vph)	41	2623	60	124	2375	155	49	1166	173	163	943	47
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	44	2790	64	132	2527	165	52	1240	184	173	1003	50
RTOR Reduction (vph)	0	3	0	0	11	0	0	13	0	0	0	0
Lane Group Flow (vph)	44	2851	0	132	2681	0	52	1411	0	173	1053	0
Turn Type	Perm		pm+pt		Perm		pm+pt		Perm		pm+pt	
Protected Phases	2		1		6		8		7		4	
Permitted Phases	2		6		8		4		8		4	
Actuated Green, G (s)	28.6	28.6		41.2	41.2		25.6	25.6		38.4	38.4	
Effective Green, g (s)	29.6	29.6		42.2	42.2		27.0	27.0		39.8	39.8	
Actuated g/C Ratio	0.33	0.33		0.47	0.47		0.30	0.30		0.44	0.44	
Clearance Time (s)	5.0	5.0		3.5	5.0		5.4	5.4		3.5	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	1492		225	2664		108	932		229	1390	
v/s Ratio Prot	c0.63		0.06		c0.47		c0.45		0.07		c0.33	
v/s Ratio Perm	0.20		0.22		0.14		0.26		0.14		0.26	
v/c Ratio	0.59	1.91		0.59	1.01		0.48	1.51		0.76	0.76	
Uniform Delay, d1	25.2	30.2		20.1	23.9		25.8	31.5		21.1	21.1	
Progression Factor	0.60	0.68		2.14	1.77		0.84	0.86		1.00	1.00	
Incremental Delay, d2	3.2	410.2		0.4	6.9		8.2	234.2		13.2	3.9	
Delay (s)	18.3	430.7		43.3	49.2		30.0	261.5		34.3	25.0	
Level of Service	B	F		D	D		C	F		C	C	
Approach Delay (s)	424.4		48.9		253.3		26.3		48.9		26.3	
Approach LOS	F		D		F		C		F		C	

Intersection Summary

HCM Average Control Delay	210.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	131.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	4550	1417	1583	3167	1417	1583	3129	1700
Flt Permitted	0.14	1.00	1.00	0.14	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	232	4550	1417	233	4550	1417	1583	3167	1417	1583	3129	1700
Volume (vph)	229	2014	112	82	1779	275	197	937	109	325	753	65
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	234	2055	114	84	1815	281	201	956	111	332	768	66
RTOR Reduction (vph)	0	0	66	0	0	26	0	0	0	0	7	0
Lane Group Flow (vph)	234	2055	48	84	1815	255	201	956	111	332	827	0
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	Prot		pm+ov		Prot	
Protected Phases	1	6	3	5	2	7	3	8	5	7	4	
Permitted Phases	6		6	2		2			8			
Actuated Green, G (s)	33.3	26.8	35.7	33.1	26.7	33.2	8.9	32.2	38.6	6.5	29.8	
Effective Green, g (s)	34.7	28.7	37.1	34.5	28.6	34.6	8.4	33.4	39.3	6.0	31.0	
Actuated g/C Ratio	0.39	0.32	0.41	0.38	0.32	0.38	0.09	0.37	0.44	0.07	0.34	
Clearance Time (s)	3.5	5.9	3.5	3.5	5.9	3.5	3.5	5.2	3.5	3.5	5.2	
Vehicle Extension (s)	3.0	5.0	3.0	3.0	5.0	3.0	3.0	5.0	3.0	3.0	5.0	
Lane Grp Cap (vph)	180	1451	584	178	1446	608	148	1175	682	106	1078	
v/s Ratio Prot	c0.09	c0.45	0.01	0.03	0.40	0.03	c0.13	c0.30	0.01	c0.21	0.26	
v/s Ratio Perm	0.42		0.03	0.15		0.15			0.07			
v/c Ratio	1.30	1.42	0.08	0.47	1.26	0.42	1.36	0.81	0.16	3.13	0.77	
Uniform Delay, d1	26.4	30.6	16.1	22.6	30.7	20.3	40.8	25.5	15.4	42.0	26.3	
Progression Factor	1.88	0.33	0.07	1.00	1.00	1.00	1.00	1.00	1.00	1.39	0.89	
Incremental Delay, d2	138.8	187.7	0.0	2.0	120.7	0.5	198.6	5.0	0.1	973.6	2.3	
Delay (s)	188.5	197.9	1.2	24.6	151.4	20.8	239.4	30.5	15.5	1031.7	25.7	
Level of Service	F	F	A	C	F	C	F	C	B	F	C	
Approach Delay (s)		187.7			129.6			62.3			312.1	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	167.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	115.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 92: Le Conte Ave & Gayley Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↕		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.93		1.00	1.00	0.84	1.00	0.97		1.00	1.00	
Flpb, ped/bikes	0.86	1.00		0.90	1.00	1.00	0.94	1.00		0.97	1.00	
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1362	1439		1429	1667	1196	1491	2979		1529	3144	
Flt Permitted	0.73	1.00		0.63	1.00	1.00	0.43	1.00		0.35	1.00	
Satd. Flow (perm)	1054	1439		944	1667	1196	677	2979		570	3144	
Volume (vph)	19	74	70	116	32	57	10	510	152	89	505	12
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	20	79	74	123	34	61	11	543	162	95	537	13
RTOR Reduction (vph)	0	45	0	0	0	44	0	37	0	0	2	0
Lane Group Flow (vph)	20	108	0	123	34	17	11	668	0	95	548	0
Conf. Peds. (#/hr)	130		66	66		130	66		85	85		66
Conf. Bikes (#/hr)			1			1			5			14
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4	2			2		
Actuated Green, G (s)	20.2	20.2		20.2	20.2	20.2	45.3	45.3		45.3	45.3	
Effective Green, g (s)	21.0	21.0		21.0	21.0	21.0	46.0	46.0		46.0	46.0	
Actuated g/C Ratio	0.28	0.28		0.28	0.28	0.28	0.61	0.61		0.61	0.61	
Clearance Time (s)	4.8	4.8		4.8	4.8	4.8	4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	295	403		264	467	335	415	1827		350	1928	
v/s Ratio Prot		0.08			0.02			c0.22			0.17	
v/s Ratio Perm	0.02			c0.13		0.01	0.02			0.17		
v/c Ratio	0.07	0.27		0.47	0.07	0.05	0.03	0.37		0.27	0.28	
Uniform Delay, d1	19.8	21.0		22.4	19.8	19.7	5.7	7.2		6.7	6.8	
Progression Factor	1.00	1.00		0.94	1.00	1.13	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	1.6		5.7	0.3	0.3	0.1	0.6		1.9	0.4	
Delay (s)	20.3	22.7		26.6	20.2	22.6	5.8	7.8		8.6	7.2	
Level of Service	C	C		C	C	C	A	A		A	A	
Approach Delay (s)		22.4			24.5			7.8			7.4	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↗	↘		↗	↕	↘	↗	↕	↘	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	
Total Lost time (s)				4.0	4.0		4.0	4.0	4.0	4.0	4.0		
Lane Util. Factor				1.00	1.00		1.00	0.95	1.00	1.00	0.95		
Frbp, ped/bikes				1.00	0.89		1.00	1.00	0.81	1.00	1.00		
Flpb, ped/bikes				1.00	1.00		0.98	1.00	1.00	0.97	1.00		
Frt				1.00	0.86		1.00	1.00	0.85	1.00	1.00		
Flt Protected				0.95	1.00		0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)				1118	902		1098	2235	807	1086	2234		
Flt Permitted				0.95	1.00		0.44	1.00	1.00	0.20	1.00		
Satd. Flow (perm)				1118	902		512	2235	807	224	2234		
Volume (vph)	0	0	0	125	4	68	3	1083	164	230	507	2	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	0	0	0	129	4	70	3	1116	169	237	523	2	
RTOR Reduction (vph)	0	0	0	0	49	0	0	0	68	0	0	0	
Lane Group Flow (vph)	0	0	0	129	25	0	3	1116	101	237	525	0	
Confl. Peds. (#/hr)	55						55	20		161	161	20	
Confl. Bikes (#/hr)							1			14			
Turn Type	Split		Perm			Perm		Perm custom					
Protected Phases	3	3			4			6					
Permitted Phases				4			6		6	2	2		
Actuated Green, G (s)				21.0	21.0		44.4	44.4	44.4	44.4	44.4		
Effective Green, g (s)				22.0	22.0		45.0	45.0	45.0	45.0	45.0		
Actuated g/C Ratio				0.29	0.29		0.60	0.60	0.60	0.60	0.60		
Clearance Time (s)				5.0	5.0		4.6	4.6	4.6	4.6	4.6		
Vehicle Extension (s)				3.0	3.0		3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)				328	265		307	1341	484	134	1340		
v/s Ratio Prot					0.03			0.50					
v/s Ratio Perm				c0.12			0.01		0.13	c1.06	0.23		
v/c Ratio				0.39	0.09		0.01	0.83	0.21	1.77	0.39		
Uniform Delay, d1				21.2	19.2		6.0	12.0	6.9	15.0	7.8		
Progression Factor				1.51	3.05		0.92	0.84	0.99	1.00	1.00		
Incremental Delay, d2				0.5	0.1		0.0	0.6	0.1	374.4	0.9		
Delay (s)				32.5	58.7		5.6	10.6	6.9	389.4	8.7		
Level of Service				C	E		A	B	A	F	A		
Approach Delay (s)		0.0			42.1			10.1			127.1		
Approach LOS		A			D			B			F		
Intersection Summary													
HCM Average Control Delay			52.6									HCM Level of Service	D
HCM Volume to Capacity ratio			1.31										
Actuated Cycle Length (s)			75.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			90.5%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		1.00	0.86		1.00	0.95	1.00	1.00	1.00	0.88
Frbp, ped/bikes	1.00	0.98		1.00	0.95		1.00	1.00	0.67	1.00	1.00	0.84
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.95	1.00	1.00	0.85	1.00	1.00
Frt	1.00	0.99		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3925		1118	3731		1058	2235	666	950	1176	1486
Flt Permitted	0.95	1.00		0.06	1.00		0.37	1.00	1.00	0.43	1.00	1.00
Satd. Flow (perm)	2168	3925		70	3731		416	2235	666	429	1176	1486
Volume (vph)	322	3711	183	53	2640	535	74	497	72	129	188	304
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	343	3948	195	56	2809	569	79	529	77	137	200	323
RTOR Reduction (vph)	0	5	0	0	22	0	0	0	0	0	0	0
Lane Group Flow (vph)	343	4138	0	56	3356	0	79	529	77	137	200	323
Conf. Peds. (#/hr)	219		166	166		217	182		283	283		182
Conf. Bikes (#/hr)			8			7			18			3
Turn Type	Prot			Perm			pm+pt		Perm	Perm		pm+ov
Protected Phases	1	6			2		3	8			4	1
Permitted Phases				2			8		8	4		4
Actuated Green, G (s)	25.7	95.7		66.0	66.0		43.5	43.5	43.5	30.2	30.2	55.9
Effective Green, g (s)	25.7	96.7		67.0	67.0		45.3	45.3	45.3	32.0	32.0	57.7
Actuated g/C Ratio	0.17	0.64		0.45	0.45		0.30	0.30	0.30	0.21	0.21	0.38
Clearance Time (s)	4.0	5.0		5.0	5.0		4.0	5.8	5.8	5.8	5.8	4.0
Vehicle Extension (s)	2.0	4.0		4.0	4.0		2.0	3.0	3.0	3.0	3.0	2.0
Lane Grp Cap (vph)	371	2530		31	1667		165	675	201	92	251	611
v/s Ratio Prot	0.16	c1.05			c0.90		0.03	c0.24			0.17	0.09
v/s Ratio Perm				0.80			0.11		0.12	c0.32		0.13
v/c Ratio	0.92	1.64		1.81	2.01		0.48	0.78	0.38	1.49	0.80	0.53
Uniform Delay, d1	61.2	26.6		41.5	41.5		40.3	47.9	41.3	59.0	55.9	35.6
Progression Factor	1.01	1.03		0.50	0.51		1.00	1.00	1.00	1.02	1.02	1.18
Incremental Delay, d2	4.1	286.2		374.3	456.2		0.8	5.9	1.2	266.0	15.0	0.4
Delay (s)	65.8	313.6		395.1	477.4		41.1	53.8	42.5	326.3	71.9	42.5
Level of Service	E	F		F	F		D	D	D	F	E	D
Approach Delay (s)		294.6			476.0			51.1			110.3	
Approach LOS		F			F			D			F	

Intersection Summary

HCM Average Control Delay	330.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.76		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	149.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑		↖		↖		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0			
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00			
Fr _t		0.99		1.00	1.00		1.00		0.85			
Fl _t Protected		1.00		0.95	1.00		0.95		1.00			
Satd. Flow (prot)		3125		1583	3167		1583		1417			
Fl _t Permitted		1.00		0.06	1.00		0.76		1.00			
Satd. Flow (perm)		3125		107	3167		1262		1417			
Volume (vph)	0	1997	191	907	1337	0	74	0	655	0	0	0
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	2059	197	935	1378	0	76	0	675	0	0	0
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	184	0	0	0
Lane Group Flow (vph)	0	2250	0	935	1378	0	76	0	491	0	0	0
Turn Type				pm+pt		custom		Over	Perm			
Protected Phases		2		1	6			1			4	
Permitted Phases				6			8			4		
Actuated Green, G (s)		57.2		100.0	100.0		11.0		38.8			
Effective Green, g (s)		58.2		101.0	101.0		11.0		38.8			
Actuated g/C Ratio		0.49		0.84	0.84		0.09		0.32			
Clearance Time (s)		5.0		4.0	5.0		4.0		4.0			
Vehicle Extension (s)		4.0		3.0	3.0		3.0		3.0			
Lane Grp Cap (vph)		1516		567	2666		116		458			
v/s Ratio Prot		0.72		c0.53	0.44				0.35			
v/s Ratio Perm				c0.85			c0.06					
v/c Ratio		1.48		1.65	0.52		0.66		1.07			
Uniform Delay, d ₁		30.9		42.8	2.7		52.7		40.6			
Progression Factor		1.00		1.21	0.65		1.00		1.00			
Incremental Delay, d ₂		221.4		298.2	0.6		12.5		62.6			
Delay (s)		252.3		349.8	2.3		65.2		103.2			
Level of Service		F		F	A		E		F			
Approach Delay (s)		252.3			142.8			99.4			0.0	
Approach LOS		F			F			F			A	

Intersection Summary

HCM Average Control Delay	183.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	139.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		0.97	0.86		1.00	0.95	1.00	1.00	0.95	0.88
Frbp, ped/bikes	1.00	0.97		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3877		2168	3977		1103	2235	959	1085	2235	1718
Flt Permitted	0.95	1.00		0.95	1.00		0.36	1.00	1.00	0.28	1.00	1.00
Satd. Flow (perm)	2168	3877		2168	3977		419	2235	959	324	2235	1718
Volume (vph)	902	4167	426	16	2841	301	249	551	132	500	295	339
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	980	4529	463	17	3088	327	271	599	143	543	321	368
RTOR Reduction (vph)	0	11	0	0	12	0	0	0	0	0	0	4
Lane Group Flow (vph)	980	4981	0	17	3403	0	271	599	143	543	321	364
Confl. Peds. (#/hr)	11		103	103		11	51		16	51		16
Confl. Bikes (#/hr)			16			5			13			18
Turn Type	Prot			Prot		pm+pt		pm+ov	Perm		pm+ov	
Protected Phases	5	2		1	6	3	8	1		4	4	5
Permitted Phases						8		8	4			4
Actuated Green, G (s)	30.0	91.5		5.0	66.5	37.1	37.1	42.1	28.1	28.1	58.1	
Effective Green, g (s)	30.0	93.0		5.0	68.0	40.0	40.0	45.0	31.0	31.0	61.0	
Actuated g/C Ratio	0.20	0.62		0.03	0.45	0.27	0.27	0.30	0.21	0.21	0.41	
Clearance Time (s)	4.0	5.5		4.0	5.5	4.0	6.9	4.0	6.9	6.9	4.0	
Vehicle Extension (s)	1.0	4.0		1.0	4.0	3.0	2.0	1.0	2.0	2.0	1.0	
Lane Grp Cap (vph)	434	2404		72	1803	135	596	313	67	462	699	
v/s Ratio Prot	c0.45	c1.28		0.01	c0.86	c0.07	0.27	0.02		0.14	0.10	
v/s Ratio Perm						0.47		0.13	c1.68		0.11	
v/c Ratio	2.26	2.07		0.24	1.89	2.01	1.01	0.46	8.10	0.69	0.52	
Uniform Delay, d1	60.0	28.5		70.6	41.0	56.6	55.0	42.6	59.5	55.1	33.5	
Progression Factor	0.73	0.43		1.22	0.72	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	566.8	482.4		0.1	399.5	478.5	38.1	0.4	3227.4	3.6	0.3	
Delay (s)	610.6	494.6		86.2	429.1	535.1	93.1	43.0	3286.9	58.8	33.8	
Level of Service	F	F		F	F	F	F	D	F	E	C	
Approach Delay (s)		513.6			427.4		204.3			1474.1		
Approach LOS		F			F		F			F		

Intersection Summary			
HCM Average Control Delay	562.9	HCM Level of Service	F
HCM Volume to Capacity ratio	3.60		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	195.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.86		0.97	0.81		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.93		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	4022		2168	4738		1118	2088		1118	2176	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1118	4022		2168	4738		1118	2088		1118	2176	
Volume (vph)	78	3544	155	177	3141	123	104	541	421	404	985	214
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	80	3616	158	181	3205	126	106	552	430	412	1005	218
RTOR Reduction (vph)	0	4	0	0	4	0	0	94	0	0	0	0
Lane Group Flow (vph)	80	3770	0	181	3327	0	106	888	0	412	1223	0
Turn Type	Prot		Prot		Prot		Prot		Prot			
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	11.6	69.0		15.0	72.4		15.7	33.0		13.5	30.8	
Effective Green, g (s)	11.6	70.5		15.0	73.9		15.7	35.0		13.5	32.8	
Actuated g/C Ratio	0.08	0.47		0.10	0.49		0.10	0.23		0.09	0.22	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	1.0	4.0		1.0	4.0		1.0	4.0		1.0	4.0	
Lane Grp Cap (vph)	86	1890		217	2334		117	487		101	476	
v/s Ratio Prot	0.07	c0.94		0.08	c0.70		0.09	c0.43		c0.37	c0.56	
v/s Ratio Perm												
v/c Ratio	0.93	1.99		0.83	1.43		0.91	1.82		4.08	2.57	
Uniform Delay, d1	68.8	39.8		66.3	38.0		66.4	57.5		68.2	58.6	
Progression Factor	1.02	1.15		0.60	0.30		1.00	1.00		1.00	1.00	
Incremental Delay, d2	14.9	447.7		2.5	191.7		53.6	379.0		1408.9	712.3	
Delay (s)	85.4	493.6		42.5	203.2		120.0	436.5		1477.1	770.9	
Level of Service	F	F		D	F		F	F		F	F	
Approach Delay (s)	485.1			195.0			405.6			948.9		
Approach LOS	F			F			F			F		

Intersection Summary

HCM Average Control Delay	450.7	HCM Level of Service	F
HCM Volume to Capacity ratio	2.20		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	187.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 98: Olympic Blvd & Sepulveda Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	4520		1583	4550	1417	1583	3167	1417	1583	3124	
Flt Permitted	0.11	1.00		0.95	1.00	1.00	0.11	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	190	4520		1583	4550	1417	189	3167	1417	189	3124	
Volume (vph)	55	2344	109	100	2362	131	191	1138	287	50	946	94
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	57	2442	114	104	2460	136	199	1185	299	52	985	98
RTOR Reduction (vph)	0	6	0	0	0	9	0	0	97	0	1	0
Lane Group Flow (vph)	57	2551	0	104	2460	127	199	1185	202	52	1082	0
Turn Type	Perm		Prot		Perm	Perm	Perm		Perm	Perm		
Protected Phases	8		7		4		6			2		
Permitted Phases	8					4	6			2		
Actuated Green, G (s)	34.0	34.0		8.2	45.7	45.7	34.3	34.3	34.3	34.3	34.3	
Effective Green, g (s)	35.0	35.0		7.7	46.7	46.7	35.3	35.3	35.3	35.3	35.3	
Actuated g/C Ratio	0.39	0.39		0.09	0.52	0.52	0.39	0.39	0.39	0.39	0.39	
Clearance Time (s)	5.0	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	74	1758		135	2361	735	74	1242	556	74	1225	
v/s Ratio Prot	c0.56		0.07		c0.54		0.37			0.35		
v/s Ratio Perm	0.30					0.09	c1.05			0.14	0.28	
v/c Ratio	0.77	1.45		0.77	1.04	0.17	2.69	0.95	0.36	0.70	0.88	
Uniform Delay, d1	24.0	27.5		40.3	21.6	11.4	27.4	26.6	19.4	22.9	25.4	
Progression Factor	0.91	0.84		0.89	1.71	2.16	0.66	0.63	0.33	1.00	1.00	
Incremental Delay, d2	38.4	205.0		7.8	23.4	0.1	763.6	2.4	0.2	43.4	9.4	
Delay (s)	60.3	228.0		43.6	60.4	24.8	781.8	19.3	6.6	66.4	34.9	
Level of Service	E	F		D	E	C	F	B	A	E	C	
Approach Delay (s)	224.4				57.9		107.2				36.3	
Approach LOS	F				E		F				D	
Intersection Summary												
HCM Average Control Delay	118.6		HCM Level of Service				F					
HCM Volume to Capacity ratio	1.99											
Actuated Cycle Length (s)	90.0		Sum of lost time (s)				12.0					
Intersection Capacity Utilization	117.3%		ICU Level of Service				H					
Analysis Period (min)	15											
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑↑		↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	4525		1583	3119		1583	3167	1417
Flt Permitted	0.14	1.00	1.00	0.12	1.00		0.95	1.00		0.14	1.00	1.00
Satd. Flow (perm)	228	4550	1417	201	4525		1583	3119		232	3167	1417
Volume (vph)	163	2041	93	102	1604	62	183	1501	167	119	938	115
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	166	2083	95	104	1637	63	187	1532	170	121	957	117
RTOR Reduction (vph)	0	0	36	0	5	0	0	10	0	0	0	42
Lane Group Flow (vph)	166	2083	59	104	1695	0	187	1693	0	121	957	75
Turn Type	Perm		pm+ov	pm+pt			Prot			Perm		Perm
Protected Phases		6	3	5	2		3	8			4	
Permitted Phases	6		6	2						4		4
Actuated Green, G (s)	27.7	27.7	40.5	35.5	35.5		12.8	44.5		28.2	28.2	28.2
Effective Green, g (s)	29.2	29.2	41.5	37.0	37.0		12.3	45.0		28.7	28.7	28.7
Actuated g/C Ratio	0.32	0.32	0.46	0.41	0.41		0.14	0.50		0.32	0.32	0.32
Clearance Time (s)	5.5	5.5	3.5	3.0	5.5		3.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	2.0	3.0	3.0		2.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	1476	716	141	1860		216	1560		74	1010	452
v/s Ratio Prot		0.46	0.01	0.03	c0.37		0.12	c0.54			0.30	
v/s Ratio Perm	c0.73		0.03	0.27						c0.52		0.05
v/c Ratio	2.24	1.41	0.08	0.74	0.91		0.87	1.08		1.64	0.95	0.17
Uniform Delay, d1	30.4	30.4	13.6	22.8	25.0		38.0	22.5		30.6	29.9	22.0
Progression Factor	1.00	1.00	1.00	2.06	1.50		1.00	1.00		0.72	0.71	0.55
Incremental Delay, d2	600.4	189.2	0.0	1.9	0.9		27.6	49.6		309.4	9.4	0.3
Delay (s)	630.8	219.6	13.6	48.9	38.3		65.6	72.1		331.4	30.7	12.5
Level of Service	F	F	B	D	D		E	E		F	C	B
Approach Delay (s)		240.3			38.9			71.4			59.4	
Approach LOS		F			D			E			E	

Intersection Summary

HCM Average Control Delay	116.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	124.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↘		↘	↗↘	↗	↘	↗↘	↗	↗↘	↗↘	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	0.86	0.86	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (prot)	1304	3730		1304	3747	1141	1304	2608	1144	2243	2264	
Flt Permitted	0.07	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (perm)	96	3730		1304	3747	1141	1304	2608	1144	2243	2264	
Volume (vph)	32	1792	44	91	1754	1206	147	177	189	1440	235	28
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	34	1906	47	97	1866	1283	156	188	201	1532	250	30
RTOR Reduction (vph)	0	2	0	0	0	453	0	0	0	0	2	0
Lane Group Flow (vph)	34	1951	0	97	1866	830	156	188	201	1021	789	0
Conf. Peds. (#/hr)	5		9	9		5	56		6	6		56
Conf. Bikes (#/hr)			4			5			8			8
Turn Type	Perm			Prot		Perm	Split		pm+ov	Split		
Protected Phases		6		5	2		3	3	5	4	4	
Permitted Phases	6					2			3			
Actuated Green, G (s)	56.0	56.0		10.0	70.0	70.0	15.0	15.0	25.0	50.0	50.0	
Effective Green, g (s)	57.0	57.0		10.0	71.0	71.0	16.0	16.0	26.0	51.0	51.0	
Actuated g/C Ratio	0.38	0.38		0.07	0.47	0.47	0.11	0.11	0.17	0.34	0.34	
Clearance Time (s)	5.0	5.0		4.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0		2.0	4.0	4.0	2.0	2.0	2.0	4.0	4.0	
Lane Grp Cap (vph)	36	1417		87	1774	540	139	278	198	763	770	
v/s Ratio Prot		0.52		0.07	0.50		c0.12	0.07	0.07	c0.46	0.35	
v/s Ratio Perm	0.35					c0.73			0.11			
v/c Ratio	0.94	1.38		1.11	1.05	1.54	1.12	0.68	1.02	1.34	1.26dl	
Uniform Delay, d1	45.0	46.5		70.0	39.5	39.5	67.0	64.5	62.0	49.5	49.5	
Progression Factor	1.44	1.43		1.09	1.09	6.06	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	106.5	172.6		65.9	25.1	242.6	112.9	5.0	67.9	161.0	38.9	
Delay (s)	171.3	239.0		142.5	68.3	481.8	179.9	69.6	129.9	210.5	88.4	
Level of Service	F	F		F	E	F	F	E	F	F	F	
Approach Delay (s)		237.8			233.9			123.4			157.2	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	208.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	140.0%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑	↖		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	0.99		1.00	1.00	0.85		1.00			1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.99	
Satd. Flow (prot)	1583	4499		1583	3167	1417		1639			3118	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.43			0.56	
Satd. Flow (perm)	1583	4499		1583	3167	1417		716			1777	
Volume (vph)	147	1103	88	32	1099	114	152	442	19	142	404	11
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	163	1226	98	36	1221	127	169	491	21	158	449	12
RTOR Reduction (vph)	0	8	0	0	0	70	0	1	0	0	1	0
Lane Group Flow (vph)	163	1316	0	36	1221	57	0	680	0	0	618	0
Turn Type	Prot			Prot		Perm	Prot				Prot	
Protected Phases	1	6		5	2		3	8			7	4
Permitted Phases						2						
Actuated Green, G (s)	11.6	48.1		3.6	40.1	40.1		26.0			26.0	
Effective Green, g (s)	11.6	48.4		3.6	40.4	40.4		26.0			26.0	
Actuated g/C Ratio	0.13	0.54		0.04	0.45	0.45		0.29			0.29	
Clearance Time (s)	4.0	4.3		4.0	4.3	4.3		4.0			4.0	
Vehicle Extension (s)	3.0	5.7		3.0	5.5	5.5		3.0			3.0	
Lane Grp Cap (vph)	204	2419		63	1422	636		207			513	
v/s Ratio Prot	c0.10	0.29		0.02	c0.39							
v/s Ratio Perm						0.04		c0.95			0.35	
v/c Ratio	0.80	0.54		0.57	0.86	0.09		3.29			79.00dl	
Uniform Delay, d1	38.1	13.6		42.4	22.2	14.2		32.0			32.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	19.3	0.9		11.9	6.9	0.3		1041.2			109.1	
Delay (s)	57.3	14.5		54.4	29.2	14.5		1073.2			141.1	
Level of Service	E	B		D	C	B		F			F	
Approach Delay (s)		19.2			28.5			1073.2			141.1	
Approach LOS		B			C			F			F	

Intersection Summary

HCM Average Control Delay	212.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	110.6%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑	↗	↗	↑↑	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.91	1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.97	1.00	1.00	0.96	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	3726		1304	3689		1266	2608	1062	1256	2424	
Flt Permitted	0.06	1.00		0.10	1.00		0.23	1.00	1.00	0.41	1.00	
Satd. Flow (perm)	84	3726		133	3689		304	2608	1062	540	2424	
Volume (vph)	210	1568	36	49	1808	82	110	374	149	178	456	151
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	223	1668	38	52	1923	87	117	398	159	189	485	161
RTOR Reduction (vph)	0	1	0	0	3	0	0	0	18	0	9	0
Lane Group Flow (vph)	223	1705	0	52	2007	0	117	398	141	189	637	0
Conf. Peds. (#/hr)	67		48	48		67	40		47	47		40
Conf. Bikes (#/hr)			7			2			2			5
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		6			2			8				4
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	95.5	95.5		95.5	95.5		46.0	46.0	46.0	46.0	46.0	
Effective Green, g (s)	96.0	96.0		96.0	96.0		46.0	46.0	46.0	46.0	46.0	
Actuated g/C Ratio	0.64	0.64		0.64	0.64		0.31	0.31	0.31	0.31	0.31	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	54	2385		85	2361		93	800	326	166	743	
v/s Ratio Prot		0.46			0.54			0.15			0.26	
v/s Ratio Perm	c2.66			0.39			c0.39		0.13	0.35		
v/c Ratio	4.13	0.71		0.61	0.85		1.26	0.50	0.43	1.14	0.86	
Uniform Delay, d1	27.0	17.9		16.0	21.3		52.0	42.5	41.6	52.0	48.9	
Progression Factor	1.00	1.00		1.48	1.59		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1451.0	1.9		3.0	0.4		177.8	2.2	4.1	112.0	12.2	
Delay (s)	1478.0	19.8		26.6	34.3		229.8	44.8	45.7	164.0	61.1	
Level of Service	F	B		C	C		F	D	D	F	E	
Approach Delay (s)		188.4			34.1			77.1			84.4	
Approach LOS		F			C			E			F	

Intersection Summary

HCM Average Control Delay	101.1	HCM Level of Service	F
HCM Volume to Capacity ratio	3.21		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	115.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.95			0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1572			1605		1583	1647		1583	1667	1417
Flt Permitted		0.94			0.88		0.44	1.00		0.37	1.00	1.00
Satd. Flow (perm)		1496			1425		732	1647		610	1667	1417
Volume (vph)	36	122	93	33	99	34	181	497	42	43	440	98
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	133	101	36	108	37	197	540	46	47	478	107
RTOR Reduction (vph)	0	40	0	0	18	0	0	4	0	0	0	39
Lane Group Flow (vph)	0	233	0	0	163	0	197	582	0	47	478	68
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		6
Actuated Green, G (s)		13.5			13.5		37.7	37.7		37.7	37.7	37.7
Effective Green, g (s)		14.0			14.0		38.0	38.0		38.0	38.0	38.0
Actuated g/C Ratio		0.23			0.23		0.63	0.63		0.63	0.63	0.63
Clearance Time (s)		4.5			4.5		4.3	4.3		4.3	4.3	4.3
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		349			333		464	1043		386	1056	897
v/s Ratio Prot							c0.35				0.29	
v/s Ratio Perm		c0.16			0.11		0.27			0.08		0.05
v/c Ratio		0.67			0.49		0.42	0.56		0.12	0.45	0.08
Uniform Delay, d1		20.9			19.9		5.5	6.2		4.4	5.7	4.2
Progression Factor		1.00			1.00		0.45	0.44		1.00	1.00	1.00
Incremental Delay, d2		4.8			1.1		0.7	0.6		0.6	1.4	0.2
Delay (s)		25.7			21.1		3.2	3.3		5.0	7.1	4.4
Level of Service		C			C		A	A		A	A	A
Approach Delay (s)		25.7			21.1			3.3			6.5	
Approach LOS		C			C			A			A	

Intersection Summary

HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕	↖	↖	↕	↕
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	3715		1304	3710		1304	1373	1167	1304	1354	
Flt Permitted	0.17	1.00		0.17	1.00		0.30	1.00	1.00	0.24	1.00	
Satd. Flow (perm)	239	3715		239	3710		411	1373	1167	334	1354	
Volume (vph)	37	1443	88	83	1740	123	109	600	113	47	488	48
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	39	1503	92	86	1812	128	114	625	118	49	508	50
RTOR Reduction (vph)	0	11	0	0	13	0	0	0	3	0	1	0
Lane Group Flow (vph)	39	1584	0	86	1927	0	114	625	115	49	557	0
Turn Type	Perm			Perm			Perm			Perm	Perm	
Protected Phases	2			2			4			4	4	
Permitted Phases	2			2			4			4	4	
Actuated Green, G (s)	22.4	22.4		22.4	22.4		28.0	28.0	28.0	28.0	28.0	
Effective Green, g (s)	23.0	23.0		23.0	23.0		29.0	29.0	29.0	29.0	29.0	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.48	0.48	0.48	0.48	0.48	
Clearance Time (s)	4.6	4.6		4.6	4.6		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)	92	1424		92	1422		199	664	564	161	654	
v/s Ratio Prot		0.43			c0.52			c0.46			0.41	
v/s Ratio Perm	0.16			0.36			0.28		0.10	0.15		
v/c Ratio	0.42	1.11		0.93	1.36		0.57	0.94	0.20	0.30	0.85	
Uniform Delay, d1	13.6	18.5		17.8	18.5		11.1	14.7	8.9	9.4	13.6	
Progression Factor	1.00	1.00		1.54	1.63		1.00	1.00	1.00	0.68	0.71	
Incremental Delay, d2	13.7	60.9		64.9	163.3		11.4	23.2	0.8	4.2	11.9	
Delay (s)	27.3	79.4		92.3	193.5		22.5	37.8	9.7	10.6	21.5	
Level of Service	C	E		F	F		C	D	A	B	C	
Approach Delay (s)		78.2			189.2			31.9			20.7	
Approach LOS		E			F			C			C	

Intersection Summary

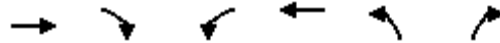
HCM Average Control Delay	107.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	135.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑	↗	↘	↑↑		↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.86	1.00	1.00	0.95		1.00	0.95	1.00
Fr't	1.00	0.98		1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4473		1583	5733	1417	1583	3051		1583	3167	1417
Flt Permitted	0.10	1.00		0.12	1.00	1.00	0.33	1.00		0.12	1.00	1.00
Satd. Flow (perm)	167	4473		200	5733	1417	553	3051		208	3167	1417
Volume (vph)	22	1169	149	126	1826	272	390	942	305	368	562	68
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	22	1193	152	129	1863	278	398	961	311	376	573	69
RTOR Reduction (vph)	0	18	0	0	0	14	0	17	0	0	0	8
Lane Group Flow (vph)	22	1327	0	129	1863	264	398	1255	0	376	573	61
Turn Type	Perm			Perm		pm+ov	pm+pt			pm+pt		Perm
Protected Phases		6			2	7	3	8		7	4	
Permitted Phases	6			2		2	8			4		4
Actuated Green, G (s)	39.0	39.0		39.0	39.0	45.0	36.1	30.1		36.1	30.1	30.1
Effective Green, g (s)	40.0	40.0		40.0	40.0	46.0	38.0	32.0		38.0	32.0	32.0
Actuated g/C Ratio	0.44	0.44		0.44	0.44	0.51	0.42	0.36		0.42	0.36	0.36
Clearance Time (s)	5.0	5.0		5.0	5.0	4.0	4.0	5.9		4.0	5.9	5.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	1988		89	2548	787	302	1085		179	1126	504
v/s Ratio Prot		0.30			0.32	0.02	0.09	0.41		c0.14	0.18	
v/s Ratio Perm	0.13			c0.64		0.16	0.47			c0.74		0.04
v/c Ratio	0.30	0.67		1.45	0.73	0.34	1.32	1.16		2.10	0.51	0.12
Uniform Delay, d1	16.0	19.7		25.0	20.6	13.0	24.8	29.0		24.0	22.8	19.5
Progression Factor	1.00	1.00		1.24	1.26	1.84	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	10.0	1.8		208.0	0.2	0.0	164.5	81.0		513.8	1.6	0.5
Delay (s)	26.0	21.5		238.9	26.1	24.0	189.4	110.0		537.8	24.5	20.0
Level of Service	C	C		F	C	C	F	F		F	C	C
Approach Delay (s)		21.6			38.0			128.9			213.8	
Approach LOS		C			D			F			F	

Intersection Summary

HCM Average Control Delay	86.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



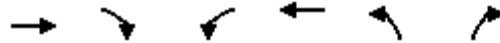
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	0.98		1.00	1.00	0.93	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3690		1304	3747	1250	
Flt Permitted	1.00		0.07	1.00	0.98	
Satd. Flow (perm)	3690		100	3747	1250	
Volume (vph)	1670	189	43	1880	167	159
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1740	197	45	1958	174	166
RTOR Reduction (vph)	14	0	0	0	10	0
Lane Group Flow (vph)	1923	0	45	1958	330	0
Turn Type			Perm			
Protected Phases	6			2	4	
Permitted Phases			2			
Actuated Green, G (s)	54.7		54.7	54.7	26.5	
Effective Green, g (s)	54.8		54.8	54.8	27.2	
Actuated g/C Ratio	0.61		0.61	0.61	0.30	
Clearance Time (s)	4.1		4.1	4.1	4.7	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2247		61	2282	378	
v/s Ratio Prot	0.52			c0.52	c0.26	
v/s Ratio Perm			0.45			
v/c Ratio	0.86		0.74	0.86	0.87	
Uniform Delay, d1	14.4		12.5	14.4	29.7	
Progression Factor	0.48		1.00	1.00	1.00	
Incremental Delay, d2	3.8		56.2	4.5	19.2	
Delay (s)	10.6		68.7	18.9	49.0	
Level of Service	B		E	B	D	
Approach Delay (s)	10.6			20.0	49.0	
Approach LOS	B			B	D	
Intersection Summary						
HCM Average Control Delay			18.0		HCM Level of Service	B
HCM Volume to Capacity ratio			0.86			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			82.0%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗			↕			↖	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.98			1.00	0.96
Flpb, ped/bikes	1.00	1.00		0.99	1.00			0.99			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.91			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.98	1.00
Satd. Flow (prot)	1300	3738		1295	3739			1199			1339	1123
Flt Permitted	0.08	1.00		0.12	1.00			0.92			0.93	1.00
Satd. Flow (perm)	104	3738		160	3739			1122			1269	1123
Volume (vph)	6	1586	14	33	1898	16	39	10	96	2	3	4
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	6	1652	15	34	1977	17	41	10	100	2	3	4
RTOR Reduction (vph)	0	1	0	0	1	0	0	15	0	0	0	3
Lane Group Flow (vph)	6	1666	0	34	1993	0	0	136	0	0	5	1
Conf. Peds. (#/hr)	30		38	38		30	24		15	15		24
Conf. Bikes (#/hr)			2			4			2			
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	65.1	65.1		65.1	65.1			16.9			16.9	16.9
Effective Green, g (s)	65.1	65.1		65.1	65.1			16.9			16.9	16.9
Actuated g/C Ratio	0.72	0.72		0.72	0.72			0.19			0.19	0.19
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	75	2704		116	2705			211			238	211
v/s Ratio Prot		0.45			c0.53							
v/s Ratio Perm	0.06			0.21				c0.12			0.00	0.00
v/c Ratio	0.08	0.62		0.29	0.74			0.65			0.02	0.00
Uniform Delay, d1	3.7	6.2		4.4	7.4			33.8			29.8	29.7
Progression Factor	2.70	3.03		0.84	0.76			1.00			1.00	1.00
Incremental Delay, d2	0.2	0.1		3.1	0.9			6.6			0.0	0.0
Delay (s)	10.1	18.9		6.8	6.5			40.4			29.8	29.7
Level of Service	B	B		A	A			D			C	C
Approach Delay (s)		18.9			6.5			40.4			29.8	
Approach LOS		B			A			D			C	

Intersection Summary

HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↓
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (prot)	3167	1417	1583	3167	3041	
Flt Permitted	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (perm)	3167	1417	1583	3167	3041	
Volume (vph)	1495	729	94	1486	425	59
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	1608	784	101	1598	457	63
RTOR Reduction (vph)	0	75	0	0	12	0
Lane Group Flow (vph)	1608	709	101	1598	508	0
Turn Type		pt+ov	Prot			
Protected Phases	2	2 4	1	6	4	
Permitted Phases						
Actuated Green, G (s)	40.9	73.9	9.0	37.4	29.1	
Effective Green, g (s)	40.8	73.5	8.5	37.3	28.7	
Actuated g/C Ratio	0.45	0.82	0.09	0.41	0.32	
Clearance Time (s)	3.9		3.5	3.9	3.6	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1436	1157	150	1313	970	
v/s Ratio Prot	c0.51	c0.50	c0.06	c0.50	0.17	
v/s Ratio Perm						
v/c Ratio	1.12	0.61	0.67	1.22	0.52	
Uniform Delay, d1	24.6	3.0	39.4	26.4	25.1	
Progression Factor	0.76	0.57	1.00	1.00	1.00	
Incremental Delay, d2	60.3	0.6	11.3	104.8	0.5	
Delay (s)	78.9	2.3	50.7	131.2	25.6	
Level of Service	E	A	D	F	C	
Approach Delay (s)	53.8			126.4	25.6	
Approach LOS	D			F	C	

Intersection Summary

HCM Average Control Delay	77.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕↕↕		↔	↕↕↕		↔	↕↕		↔	↕↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	3684		1304	3671		1304	2564		1301	2425	
Flt Permitted	0.14	1.00		0.14	1.00		0.13	1.00		0.20	1.00	
Satd. Flow (perm)	188	3684		188	3671		178	2564		268	2425	
Volume (vph)	122	1384	87	156	1588	64	263	752	61	95	673	264
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	126	1427	90	161	1637	66	271	775	63	98	694	272
RTOR Reduction (vph)	0	8	0	0	5	0	0	6	0	0	46	0
Lane Group Flow (vph)	126	1509	0	161	1698	0	271	832	0	98	920	0
Conf. Peds. (#/hr)	145		83	83		145	78		51	51		78
Conf. Bikes (#/hr)			5			5			5			3
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	34.2	28.2		34.2	28.2		41.8	29.8		33.8	25.8	
Effective Green, g (s)	35.2	29.2		35.2	29.2		42.8	30.8		34.8	26.8	
Actuated g/C Ratio	0.39	0.32		0.39	0.32		0.48	0.34		0.39	0.30	
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	148	1195		148	1191		235	877		195	722	
v/s Ratio Prot	0.06	0.41		c0.07	c0.46		c0.15	0.32		0.04	c0.38	
v/s Ratio Perm	0.28			0.35			0.39			0.15		
v/c Ratio	0.85	1.26		1.09	1.43		1.15	0.95		0.50	1.27	
Uniform Delay, d1	23.0	30.4		24.8	30.4		24.4	28.8		19.2	31.6	
Progression Factor	1.24	0.91		1.44	0.86		1.36	1.40		1.00	1.00	
Incremental Delay, d2	27.2	123.2		85.5	195.0		98.1	15.0		2.0	134.3	
Delay (s)	55.7	150.8		121.4	221.0		131.3	55.5		21.2	165.9	
Level of Service	E	F		F	F		F	E		C	F	
Approach Delay (s)		143.5			212.4			74.0			152.6	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	154.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	124.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frbp, ped/bikes		0.98			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.92			0.98			1.00			1.00	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1501			1596			3140			3146	
Flt Permitted		0.94			0.75			0.86			0.93	
Satd. Flow (perm)		1421			1213			2706			2928	
Volume (vph)	24	74	130	59	135	40	45	1101	35	14	991	27
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	26	80	140	63	145	43	48	1184	38	15	1066	29
RTOR Reduction (vph)	0	58	0	0	9	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	188	0	0	242	0	0	1268	0	0	1108	0
Conf. Peds. (#/hr)	10		8	8		10	19		14	14		19
Conf. Bikes (#/hr)			6			4			4			3
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		19.9			19.9			61.7			61.7	
Effective Green, g (s)		19.9			19.9			62.1			62.1	
Actuated g/C Ratio		0.22			0.22			0.69			0.69	
Clearance Time (s)		4.0			4.0			4.4			4.4	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		314			268			1867			2020	
v/s Ratio Prot												
v/s Ratio Perm		0.13			c0.20			c0.47			0.38	
v/c Ratio		0.60			0.90			0.68			0.55	
Uniform Delay, d1		31.5			34.1			8.1			7.0	
Progression Factor		1.00			1.00			1.00			0.70	
Incremental Delay, d2		3.1			30.6			2.0			0.1	
Delay (s)		34.6			64.7			10.2			5.0	
Level of Service		C			E			B			A	
Approach Delay (s)		34.6			64.7			10.2			5.0	
Approach LOS		C			E			B			A	
Intersection Summary												
HCM Average Control Delay			15.0					HCM Level of Service			B	
HCM Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			90.0					Sum of lost time (s)			8.0	
Intersection Capacity Utilization			106.5%					ICU Level of Service			G	
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00		0.91		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85		0.98		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	2608	1167		3676		1304	2608	1167	1304	2603	
Flt Permitted	0.08	1.00	1.00		1.00		0.15	1.00	1.00	0.18	1.00	
Satd. Flow (perm)	104	2608	1167		3676		203	2608	1167	248	2603	
Volume (vph)	36	1023	81	0	1619	235	82	959	132	107	1038	12
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	38	1077	85	0	1704	247	86	1009	139	113	1093	13
RTOR Reduction (vph)	0	0	31	0	16	0	0	0	21	0	1	0
Lane Group Flow (vph)	38	1077	54	0	1935	0	86	1009	118	113	1105	0
Turn Type	Perm		Perm				Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4				2		2		6	
Actuated Green, G (s)	52.0	52.0	52.0		52.0		58.0	58.0	58.0	58.0	58.0	
Effective Green, g (s)	53.0	53.0	53.0		53.0		59.0	59.0	59.0	59.0	59.0	
Actuated g/C Ratio	0.44	0.44	0.44		0.44		0.49	0.49	0.49	0.49	0.49	
Clearance Time (s)	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	46	1152	515		1624		100	1282	574	122	1280	
v/s Ratio Prot		0.41			c0.53			0.39			0.42	
v/s Ratio Perm	0.37		0.05				0.42		0.10	c0.46		
v/c Ratio	0.83	0.93	0.10		1.19		0.86	0.79	0.21	0.93	0.86	
Uniform Delay, d1	29.4	31.9	19.6		33.5		26.9	25.3	17.3	28.5	26.9	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	87.7	14.9	0.4		92.7		57.7	4.9	0.8	63.6	7.9	
Delay (s)	117.1	46.7	20.0		126.2		84.6	30.2	18.1	92.0	34.8	
Level of Service	F	D	C		F		F	C	B	F	C	
Approach Delay (s)		47.1			126.2			32.6			40.1	
Approach LOS		D			F			C			D	
Intersection Summary												
HCM Average Control Delay			69.9				HCM Level of Service			E		
HCM Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			115.7%				ICU Level of Service			H		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘↗	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	3072	4550	1417	1583	3167	1417	1583	3167	1417
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1583	4550	1417	3072	4550	1417	1583	3167	1417	1583	3167	1417
Volume (vph)	151	1432	227	216	1870	208	543	1313	203	300	1168	131
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	154	1461	232	220	1908	212	554	1340	207	306	1192	134
RTOR Reduction (vph)	0	0	13	0	0	100	0	0	5	0	0	0
Lane Group Flow (vph)	154	1461	219	220	1908	112	554	1340	202	306	1192	134
Turn Type	Prot	pm+ov		Prot	Perm		Prot	pm+ov		Prot	pm+ov	
Protected Phases	3	8	1	7	4		1	6	7	5	2	3
Permitted Phases			8			4			6			2
Actuated Green, G (s)	13.0	37.8	50.8	12.2	37.0	37.0	13.0	37.0	49.2	13.0	37.0	50.0
Effective Green, g (s)	13.0	39.8	52.8	12.2	39.0	39.0	13.0	39.0	51.2	13.0	39.0	52.0
Actuated g/C Ratio	0.11	0.33	0.44	0.10	0.32	0.32	0.11	0.32	0.43	0.11	0.32	0.43
Clearance Time (s)	4.0	6.0	4.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0
Vehicle Extension (s)	3.0	4.7	3.0	3.0	5.0	5.0	3.0	4.5	3.0	3.0	4.6	3.0
Lane Grp Cap (vph)	171	1509	671	312	1479	461	171	1029	652	171	1029	661
v/s Ratio Prot	c0.10	0.32	0.04	0.07	c0.42		c0.35	c0.42	0.03	0.19	0.38	0.02
v/s Ratio Perm			0.12			0.08			0.11			0.07
v/c Ratio	0.90	0.97	0.33	0.71	1.29	0.24	3.24	1.30	0.31	1.79	1.16	0.20
Uniform Delay, d1	52.9	39.5	22.0	52.2	40.5	29.7	53.5	40.5	22.7	53.5	40.5	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	41.5	16.2	0.3	7.1	135.7	0.6	1022.9	143.2	0.3	377.7	82.4	0.2
Delay (s)	94.4	55.7	22.2	59.2	176.2	30.3	1076.4	183.7	23.0	431.2	122.9	21.3
Level of Service	F	E	C	E	F	C	F	F	C	F	F	C
Approach Delay (s)		54.7			152.0			403.2			172.3	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	200.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.49		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	132.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕		↔	↕	↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.98		1.00	0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	3101		1583	3069		1583	4492		1583	3167	1417
Flt Permitted	0.17	1.00		0.17	1.00		0.11	1.00		0.12	1.00	1.00
Satd. Flow (perm)	286	3101		285	3069		181	4492		207	3167	1417
Volume (vph)	159	1007	162	183	847	219	325	1180	110	86	1129	161
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	161	1017	164	185	856	221	328	1192	111	87	1140	163
RTOR Reduction (vph)	0	15	0	0	26	0	0	11	0	0	0	11
Lane Group Flow (vph)	161	1166	0	185	1051	0	328	1292	0	87	1140	152
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt		pm+pt		pm+ov	
Protected Phases	1	6		5	2		3	8		7	4	1
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	30.7	22.3		30.9	22.4		44.3	35.8		40.1	33.7	42.1
Effective Green, g (s)	31.2	23.3		31.4	23.4		44.8	36.8		40.6	34.7	42.6
Actuated g/C Ratio	0.35	0.26		0.35	0.26		0.50	0.41		0.45	0.39	0.47
Clearance Time (s)	3.5	5.0		3.5	5.0		3.5	5.0		3.5	5.0	3.5
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	4.3		3.0	4.6	3.0
Lane Grp Cap (vph)	213	803		215	798		215	1837		184	1221	734
v/s Ratio Prot	0.07	c0.38		c0.08	0.34		c0.14	0.29		0.03	0.36	0.02
v/s Ratio Perm	0.20			0.22			c0.62			0.18		0.09
v/c Ratio	0.76	1.45		0.86	1.32		1.53	0.70		0.47	0.93	0.21
Uniform Delay, d1	24.4	33.4		42.3	33.3		22.1	22.1		15.6	26.5	13.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	14.1	210.5		27.8	151.5		258.7	1.4		1.9	13.2	0.1
Delay (s)	38.5	243.8		70.1	184.8		280.9	23.5		17.6	39.8	14.0
Level of Service	D	F		E	F		F	C		B	D	B
Approach Delay (s)		219.2			168.0			75.2			35.3	
Approach LOS		F			F			E			D	

Intersection Summary

HCM Average Control Delay	120.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	116.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	↵
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	2584		1304	2608	1304	1167
Flt Permitted	1.00		0.15	1.00	0.95	1.00
Satd. Flow (perm)	2584		206	2608	1304	1167
Volume (vph)	1144	75	236	1750	134	193
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	1257	82	259	1923	147	212
RTOR Reduction (vph)	4	0	0	0	0	47
Lane Group Flow (vph)	1335	0	259	1923	147	165
Turn Type			Perm			Perm
Protected Phases	5			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	59.3		59.3	59.3	22.7	22.7
Effective Green, g (s)	59.3		59.3	59.3	22.7	22.7
Actuated g/C Ratio	0.66		0.66	0.66	0.25	0.25
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	4.0		4.0	4.0	3.0	3.0
Lane Grp Cap (vph)	1703		136	1718	329	294
v/s Ratio Prot	0.52			0.74	0.11	
v/s Ratio Perm			c1.26			c0.14
v/c Ratio	0.78		1.90	1.12	0.45	0.56
Uniform Delay, d1	10.8		15.4	15.4	28.4	29.3
Progression Factor	1.70		1.94	1.95	1.00	1.00
Incremental Delay, d2	2.6		409.5	54.6	1.0	2.4
Delay (s)	21.0		439.3	84.6	29.3	31.7
Level of Service	C		F	F	C	C
Approach Delay (s)	21.0			126.7	30.8	
Approach LOS	C			F	C	

Intersection Summary

HCM Average Control Delay	81.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1583	3158		1583	3151			1616			1608	
Flt Permitted	0.14	1.00		0.20	1.00			0.95			0.95	
Satd. Flow (perm)	229	3158		338	3151			1548			1530	
Volume (vph)	29	946	17	94	1465	50	11	86	23	62	308	101
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	30	975	18	97	1510	52	11	89	24	64	318	104
RTOR Reduction (vph)	0	2	0	0	4	0	0	15	0	0	4	0
Lane Group Flow (vph)	30	991	0	97	1558	0	0	109	0	0	482	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	6		2		2		8		8		4	
Permitted Phases	6		2		2		8		8		4	
Actuated Green, G (s)	28.8	28.8		28.8	28.8			22.0			22.0	
Effective Green, g (s)	29.1	29.1		29.1	29.1			22.9			22.9	
Actuated g/C Ratio	0.49	0.49		0.49	0.49			0.38			0.38	
Clearance Time (s)	4.3	4.3		4.3	4.3			4.9			4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	111	1532		164	1528			591			584	
v/s Ratio Prot		0.31			c0.49							
v/s Ratio Perm	0.13			0.29				0.07			c0.32	
v/c Ratio	0.27	0.65		0.59	1.02			0.18			0.83	
Uniform Delay, d1	9.2	11.6		11.2	15.4			12.3			16.7	
Progression Factor	0.80	0.73		1.00	1.00			1.00			1.00	
Incremental Delay, d2	5.4	1.9		14.7	28.2			0.2			9.3	
Delay (s)	12.7	10.4		25.9	43.6			12.5			26.1	
Level of Service	B	B		C	D			B			C	
Approach Delay (s)		10.5			42.6			12.5			26.1	
Approach LOS		B			D			B			C	

Intersection Summary

HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)					4.0			4.0		4.0	4.0	
Lane Util. Factor					1.00			0.95		1.00	0.95	
Frbp, ped/bikes					1.00			1.00		1.00	1.00	
Flpb, ped/bikes					1.00			1.00		1.00	1.00	
Frt					0.96			1.00		1.00	1.00	
Flt Protected					0.97			1.00		0.95	1.00	
Satd. Flow (prot)					1543			3147		1583	3167	
Flt Permitted					0.79			1.00		0.14	1.00	
Satd. Flow (perm)					1268			3147		236	3167	
Volume (vph)	0	0	0	162	0	73	0	1200	27	79	2058	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	172	0	78	0	1277	29	84	2189	0
RTOR Reduction (vph)	0	0	0	0	17	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	233	0	0	1304	0	84	2189	0
Conf. Peds. (#/hr)							10		32	32		10
Conf. Bikes (#/hr)			1						2			4
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)					30.5			61.0		61.0	61.0	
Effective Green, g (s)					31.0			61.0		61.0	61.0	
Actuated g/C Ratio					0.31			0.61		0.61	0.61	
Clearance Time (s)					4.5			4.0		4.0	4.0	
Vehicle Extension (s)					3.0			5.0		5.0	5.0	
Lane Grp Cap (vph)					393			1920		144	1932	
v/s Ratio Prot								0.41			c0.69	
v/s Ratio Perm					c0.18					0.36		
v/c Ratio					0.59			0.68		0.58	1.13	
Uniform Delay, d1					29.2			13.0		11.8	19.5	
Progression Factor					1.00			1.00		1.00	1.00	
Incremental Delay, d2					6.5			2.0		16.1	67.0	
Delay (s)					35.6			14.9		27.9	86.5	
Level of Service					D			B		C	F	
Approach Delay (s)		0.0			35.6			14.9			84.3	
Approach LOS		A			D			B			F	
Intersection Summary												
HCM Average Control Delay			57.5									HCM Level of Service E
HCM Volume to Capacity ratio			0.95									
Actuated Cycle Length (s)			100.0									Sum of lost time (s) 8.0
Intersection Capacity Utilization			95.1%									ICU Level of Service F
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↔↔	↑↑		↗	↑↑	↗	↗	↑↑↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00	1.00	0.91	
Frbp, ped/bikes	1.00	1.00	0.94	1.00	0.99		1.00	1.00	0.95	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3072	3167	1325	3072	3128		1583	3167	1352	1583	4427	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.09	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3072	3167	1325	3072	3128		155	3167	1352	171	4427	
Volume (vph)	82	597	67	375	1164	55	99	1145	324	20	1914	217
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	85	615	69	387	1200	57	102	1180	334	21	1973	224
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	88	0	11	0
Lane Group Flow (vph)	85	615	69	387	1254	0	102	1180	246	21	2186	0
Conf. Peds. (#/hr)	73		41	41		73	67		26	26		67
Conf. Bikes (#/hr)			3			4			1			4
Turn Type	Prot	pm+ov		Prot		pm+pt		pm+ov	pm+pt			
Protected Phases	5	2	3	1	6	3	8	1	7	4		
Permitted Phases			2			8		8	4			
Actuated Green, G (s)	6.4	48.8	55.8	8.0	50.4	48.5	41.7	49.7	40.3	37.5		
Effective Green, g (s)	6.4	50.1	57.1	8.0	51.7	49.9	43.1	51.1	41.7	38.9		
Actuated g/C Ratio	0.05	0.42	0.48	0.07	0.43	0.42	0.36	0.43	0.35	0.32		
Clearance Time (s)	4.0	5.3	4.0	4.0	5.3	4.0	5.4	4.0	4.0	5.4		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	164	1322	675	205	1348	148	1137	621	92	1435		
v/s Ratio Prot	0.03	c0.19	0.01	c0.13	c0.40	c0.04	0.37	0.03	0.01	c0.49		
v/s Ratio Perm			0.05			0.25		0.16	0.07			
v/c Ratio	0.52	0.47	0.10	1.89	0.93	0.69	1.04	0.40	0.23	1.52		
Uniform Delay, d1	55.3	25.3	17.3	56.0	32.4	56.9	38.5	23.8	30.3	40.5		
Progression Factor	0.80	0.51	0.51	0.94	1.26	1.28	1.32	2.42	1.00	1.00		
Incremental Delay, d2	2.4	1.0	0.1	404.0	3.9	6.0	28.8	0.2	1.3	238.9		
Delay (s)	46.5	13.9	8.9	456.6	44.9	78.7	79.5	57.7	31.6	279.5		
Level of Service	D	B	A	F	D	E	E	E	C	F		
Approach Delay (s)		17.1			141.8		75.0			277.2		
Approach LOS		B			F		E			F		

Intersection Summary

HCM Average Control Delay	157.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘	↑↑	↗	↘	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3167	1417	1583	3097		1583	3167	1417	1583	3084	
Flt Permitted	0.08	1.00	1.00	0.33	1.00		0.13	1.00	1.00	0.27	1.00	
Satd. Flow (perm)	132	3167	1417	550	3097		220	3167	1417	442	3084	
Volume (vph)	64	612	241	217	1059	181	261	730	43	168	871	183
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	67	644	254	228	1115	191	275	768	45	177	917	193
RTOR Reduction (vph)	0	0	41	0	12	0	0	0	24	0	15	0
Lane Group Flow (vph)	67	644	213	228	1294	0	275	768	21	177	1095	0
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6		6	2			8		8		4	
Actuated Green, G (s)	54.6	54.6	54.6	54.6	54.6		54.0	54.0	54.0	54.0	54.0	
Effective Green, g (s)	56.5	56.5	56.5	56.5	56.5		55.5	55.5	55.5	55.5	55.5	
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.47		0.46	0.46	0.46	0.46	0.46	
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9		5.5	5.5	5.5	5.5	5.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	62	1491	667	259	1458		102	1465	655	204	1426	
v/s Ratio Prot		0.20			0.42			0.24			0.36	
v/s Ratio Perm	c0.51		0.15	0.41			c1.25		0.01	0.40		
v/c Ratio	1.08	0.43	0.32	0.88	0.89		2.70	0.52	0.03	0.87	0.77	
Uniform Delay, d1	31.8	21.1	19.8	28.7	28.9		32.2	22.9	17.6	29.0	26.9	
Progression Factor	1.20	1.15	1.24	1.07	1.05		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	125.5	0.7	1.0	10.4	2.3		790.3	1.3	0.1	36.0	4.0	
Delay (s)	163.5	24.9	25.5	41.2	32.6		822.6	24.2	17.7	65.0	30.9	
Level of Service	F	C	C	D	C		F	C	B	E	C	
Approach Delay (s)		34.7			33.9			225.7			35.6	
Approach LOS		C			C			F			D	

Intersection Summary

HCM Average Control Delay	77.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	110.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖	↖	↕	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3113		1583	3076		1583	1667	1417	1583	1597	
Flt Permitted	0.20	1.00		0.20	1.00		0.14	1.00	1.00	0.39	1.00	
Satd. Flow (perm)	327	3113		327	3076		231	1667	1417	647	1597	
Volume (vph)	52	675	86	89	1214	287	55	445	91	58	539	209
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	734	93	97	1320	312	60	484	99	63	586	227
RTOR Reduction (vph)	0	17	0	0	34	0	0	0	25	0	2	0
Lane Group Flow (vph)	57	811	0	97	1598	0	60	484	74	63	811	0
Turn Type	Perm			Perm			Perm			Perm	Perm	
Protected Phases	6			2			8			8	4	
Permitted Phases	6			2			8			8	4	
Actuated Green, G (s)	20.1	20.1		20.1	20.1		31.0	31.0	31.0	31.0	31.0	
Effective Green, g (s)	20.4	20.4		20.4	20.4		31.6	31.6	31.6	31.6	31.6	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.53	0.53	0.53	0.53	0.53	
Clearance Time (s)	4.3	4.3		4.3	4.3		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	1058		111	1046		122	878	746	341	841	
v/s Ratio Prot		0.26			c0.52			0.29			c0.51	
v/s Ratio Perm	0.17			0.30			0.26		0.05	0.10		
v/c Ratio	0.51	0.77		0.87	1.53		0.49	0.55	0.10	0.18	0.96	
Uniform Delay, d1	15.8	17.7		18.6	19.8		9.1	9.5	7.1	7.4	13.7	
Progression Factor	1.00	1.00		0.94	0.97		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	16.0	5.3		8.8	237.8		13.5	2.5	0.3	1.2	23.4	
Delay (s)	31.8	23.0		26.3	257.0		22.6	12.0	7.4	8.6	37.1	
Level of Service	C	C		C	F		C	B	A	A	D	
Approach Delay (s)		23.5			244.1			12.2			35.0	
Approach LOS		C			F			B			D	

Intersection Summary

HCM Average Control Delay	116.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	119.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↕		↰	↕	↰		↕			↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98			0.98	
Satd. Flow (prot)	1304	2599		1304	2608	1167		1315			1316	
Flt Permitted	0.11	1.00		0.17	1.00	1.00		0.85			0.71	
Satd. Flow (perm)	146	2599		240	2608	1167		1135			960	
Volume (vph)	23	1227	28	41	1579	18	64	84	34	62	46	16
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	24	1265	29	42	1628	19	66	87	35	64	47	16
RTOR Reduction (vph)	0	1	0	0	0	5	0	10	0	0	6	0
Lane Group Flow (vph)	24	1293	0	42	1628	14	0	178	0	0	121	0
Turn Type	Perm			Perm			Perm	Perm			Perm	
Protected Phases	2			6			6	8			4	
Permitted Phases	2			6			6	8			4	
Actuated Green, G (s)	63.6	63.6		63.6	63.6	63.6		17.3			17.3	
Effective Green, g (s)	64.2	64.2		64.2	64.2	64.2		17.8			17.8	
Actuated g/C Ratio	0.71	0.71		0.71	0.71	0.71		0.20			0.20	
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6		4.5			4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0		2.0			2.0	
Lane Grp Cap (vph)	104	1854		171	1860	832		224			190	
v/s Ratio Prot	0.50			c0.62								
v/s Ratio Perm	0.16			0.18		0.01		c0.16			0.13	
v/c Ratio	0.23	0.70		0.25	0.88	0.02		0.79			0.63	
Uniform Delay, d1	4.4	7.4		4.5	9.8	3.7		34.3			33.1	
Progression Factor	0.44	0.60		0.76	0.60	1.01		1.00			1.00	
Incremental Delay, d2	0.5	0.2		0.3	0.6	0.0		16.2			5.0	
Delay (s)	2.4	4.6		3.7	6.5	3.8		50.6			38.1	
Level of Service	A	A		A	A	A		D			D	
Approach Delay (s)	4.6			6.4				50.6			38.1	
Approach LOS	A			A				D			D	

Intersection Summary

HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↗	↕			↕			↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.93			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1304	2599		1304	2598			1270			1300	
Flt Permitted	0.15	1.00		0.15	1.00			0.94			0.87	
Satd. Flow (perm)	211	2599		211	2598			1204			1150	
Volume (vph)	21	1073	26	213	1436	38	33	91	129	61	110	75
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	22	1118	27	222	1496	40	34	95	134	64	115	78
RTOR Reduction (vph)	0	3	0	0	3	0	0	19	0	0	5	0
Lane Group Flow (vph)	22	1142	0	222	1533	0	0	244	0	0	252	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	25.5	25.5		25.5	25.5			25.5			25.5	
Effective Green, g (s)	26.0	26.0		26.0	26.0			26.0			26.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.43			0.43	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0			2.0	
Lane Grp Cap (vph)	91	1126		91	1126			522			498	
v/s Ratio Prot		0.44			0.59							
v/s Ratio Perm	0.10			c1.05				0.20			c0.22	
v/c Ratio	0.24	1.01		2.44	1.36			0.47			0.51	
Uniform Delay, d1	10.8	17.0		17.0	17.0			12.1			12.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	6.2	30.4		679.7	168.3			3.0			3.6	
Delay (s)	17.0	47.4		696.7	185.3			15.1			16.0	
Level of Service	B	D		F	F			B			B	
Approach Delay (s)		46.9			249.9			15.1			16.0	
Approach LOS		D			F			B			B	

Intersection Summary

HCM Average Control Delay	145.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	106.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	1632		1583	1667	1417	1583	1667	1417	1583	1667	1417
Flt Permitted	0.40	1.00		0.21	1.00	1.00	0.25	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	675	1632		351	1667	1417	416	1667	1417	613	1667	1417
Volume (vph)	79	493	80	73	382	54	56	416	64	98	533	53
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	84	524	85	78	406	57	60	443	68	104	567	56
RTOR Reduction (vph)	0	10	0	0	0	32	0	0	39	0	0	32
Lane Group Flow (vph)	84	599	0	78	406	25	60	443	29	104	567	24
Turn Type	Perm			Perm			Perm	Perm		Perm	Perm	custom
Protected Phases	4			4			2			2		
Permitted Phases	4			4		4	2		2	2		4
Actuated Green, G (s)	25.5	25.5		25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Effective Green, g (s)	26.0	26.0		26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.43	0.43		0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	293	707		152	722	614	180	722	614	266	722	614
v/s Ratio Prot	c0.37			0.24			0.27			c0.34		
v/s Ratio Perm	0.12			0.22		0.02	0.14		0.02	0.17		0.02
v/c Ratio	0.29	0.85		0.51	0.56	0.04	0.33	0.61	0.05	0.39	0.79	0.04
Uniform Delay, d1	11.0	15.2		12.4	12.7	9.8	11.3	13.1	9.8	11.6	14.6	9.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5	12.1		11.8	3.2	0.1	4.9	3.9	0.1	4.3	8.4	0.1
Delay (s)	13.5	27.3		24.2	15.9	9.9	16.2	17.0	10.0	15.9	23.0	9.9
Level of Service	B	C		C	B	A	B	B	A	B	C	A
Approach Delay (s)	25.6			16.5			16.1			21.0		
Approach LOS	C			B			B			C		

Intersection Summary

HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗	↖	↖	↖	↖	↖	↖	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.82	1.00	1.00	0.90	1.00	1.00	0.89
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2579		1304	2608	961	1304	1373	1047	1301	1373	1042
Flt Permitted	0.13	1.00		0.12	1.00	1.00	0.13	1.00	1.00	0.14	1.00	1.00
Satd. Flow (perm)	182	2579		170	2608	961	172	1373	1047	198	1373	1042
Volume (vph)	40	1169	66	121	1323	169	78	516	75	108	624	90
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	43	1244	70	129	1407	180	83	549	80	115	664	96
RTOR Reduction (vph)	0	5	0	0	0	105	0	0	52	0	0	61
Lane Group Flow (vph)	43	1309	0	129	1407	75	83	549	28	115	664	35
Conf. Peds. (#/hr)	72		37	37		72	95		90	90		95
Conf. Bikes (#/hr)			4			6			4			4
Turn Type	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	32.7	29.5		37.1	31.7	31.7	35.8	31.4	31.4	38.0	32.5	32.5
Effective Green, g (s)	33.9	30.1		38.3	32.3	32.3	36.8	31.9	31.9	39.0	33.0	33.0
Actuated g/C Ratio	0.38	0.33		0.43	0.36	0.36	0.41	0.35	0.35	0.43	0.37	0.37
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	116	863		148	936	345	132	487	371	159	503	382
v/s Ratio Prot	0.02	0.51		c0.06	c0.54		0.03	0.40		c0.05	c0.48	
v/s Ratio Perm	0.12			0.31		0.08	0.22		0.03	0.26		0.03
v/c Ratio	0.37	1.52		0.87	1.50	0.22	0.63	1.13	0.08	0.72	1.32	0.09
Uniform Delay, d1	23.1	29.9		43.5	28.9	20.1	21.5	29.1	19.3	19.3	28.5	18.7
Progression Factor	0.84	0.70		1.06	1.10	1.79	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	236.3		22.3	229.1	0.7	9.0	80.6	0.1	15.0	157.5	0.1
Delay (s)	20.5	257.2		68.5	260.8	36.7	30.5	109.6	19.4	34.3	186.0	18.8
Level of Service	C	F		E	F	D	C	F	B	C	F	B
Approach Delay (s)		249.7			222.8			90.3			147.7	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	196.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	119.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↖		↖	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frbp, ped/bikes		1.00	0.95		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		0.99	1.00	
Frt		1.00	0.85		0.99		1.00	0.99		1.00	1.00	
Flt Protected		0.99	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1652	1353		1625		1583	1638		1572	1659	
Flt Permitted		0.89	1.00		0.95		0.20	1.00		0.27	1.00	
Satd. Flow (perm)		1484	1353		1546		327	1638		444	1659	
Volume (vph)	24	130	115	33	218	28	66	643	59	11	797	19
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	26	140	124	35	234	30	71	691	63	12	857	20
RTOR Reduction (vph)	0	0	97	0	7	0	0	5	0	0	1	0
Lane Group Flow (vph)	0	166	27	0	292	0	71	749	0	12	876	0
Conf. Peds. (#/hr)	12		25	25		12	21		16	16		21
Conf. Bikes (#/hr)			4			4			4			3
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)		12.8	12.8		12.8		38.2	38.2		38.2	38.2	
Effective Green, g (s)		13.3	13.3		13.3		38.7	38.7		38.7	38.7	
Actuated g/C Ratio		0.22	0.22		0.22		0.65	0.65		0.65	0.65	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		0.2	0.2		0.2		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		329	300		343		211	1057		286	1070	
v/s Ratio Prot								0.46				c0.53
v/s Ratio Perm		0.11	0.02		c0.19		0.22			0.03		
v/c Ratio		0.50	0.09		0.85		0.34	0.71		0.04	0.82	
Uniform Delay, d1		20.5	18.6		22.4		4.8	7.0		3.9	8.0	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4	0.0		17.4		4.3	4.0		0.3	7.0	
Delay (s)		20.9	18.6		39.8		9.1	11.0		4.2	15.0	
Level of Service		C	B		D		A	B		A	B	
Approach Delay (s)		19.9			39.8			10.8			14.8	
Approach LOS		B			D			B			B	
Intersection Summary												
HCM Average Control Delay			17.3				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			60.0				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			97.8%				ICU Level of Service				F	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↘	↘	↑↑	↘	↘	↑	↘	↘	↑	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2608	1167	1304	2608	1167	1304	1373	1167	1304	1373	1167
Flt Permitted	0.10	1.00	1.00	0.20	1.00	1.00	0.14	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)	139	2608	1167	280	2608	1167	191	1373	1167	402	1373	1167
Volume (vph)	69	874	31	92	1155	230	85	489	60	212	659	103
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	73	920	33	97	1216	242	89	515	63	223	694	108
RTOR Reduction (vph)	0	0	18	0	0	132	0	0	34	0	0	16
Lane Group Flow (vph)	73	920	15	97	1216	110	89	515	29	223	694	92
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		2			6			8				4
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5
Effective Green, g (s)	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0
Actuated g/C Ratio	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	63	1188	532	128	1188	532	87	625	532	183	625	532
v/s Ratio Prot		0.35			0.47			0.38				0.51
v/s Ratio Perm	c0.53		0.01	0.35		0.09	0.46		0.02	c0.55		0.08
v/c Ratio	1.16	0.77	0.03	0.76	1.02	0.21	1.02	0.82	0.05	1.22	1.11	0.17
Uniform Delay, d1	24.5	20.6	13.5	20.4	24.5	14.7	24.5	21.4	13.7	24.5	24.5	14.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	162.9	5.0	0.1	33.6	32.2	0.9	102.9	8.7	0.0	137.6	70.2	0.2
Delay (s)	187.4	25.6	13.6	54.0	56.7	15.6	127.4	30.0	13.7	162.1	94.7	14.6
Level of Service	F	C	B	D	E	B	F	C	B	F	F	B
Approach Delay (s)		36.7			50.2			41.5			100.9	
Approach LOS		D			D			D			F	

Intersection Summary

HCM Average Control Delay	57.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	115.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↘	↘	↗	↘	↘	↗	↘	↘	↗	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.90	1.00	1.00	0.88	1.00	1.00	0.94	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2608	1050	1293	2608	1022	1296	1373	1100	1282	1363	1363
Flt Permitted	0.13	1.00	1.00	0.15	1.00	1.00	0.15	1.00	1.00	0.31	1.00	1.00
Satd. Flow (perm)	175	2608	1050	198	2608	1022	208	1373	1100	412	1363	1363
Volume (vph)	34	1137	106	109	1199	74	80	443	164	95	571	23
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	35	1160	108	111	1223	76	82	452	167	97	583	23
RTOR Reduction (vph)	0	0	53	0	0	37	0	0	26	0	2	0
Lane Group Flow (vph)	35	1160	55	111	1223	39	82	452	141	97	604	0
Confl. Peds. (#/hr)	43		34	34		43	23		40	40		23
Confl. Bikes (#/hr)			2			7			5			2
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		2			6			8				4
Permitted Phases	2		2	6		6	8		8		4	
Actuated Green, G (s)	45.4	45.4	45.4	45.4	45.4	45.4	35.5	35.5	35.5	35.5	35.5	35.5
Effective Green, g (s)	46.0	46.0	46.0	46.0	46.0	46.0	36.0	36.0	36.0	36.0	36.0	36.0
Actuated g/C Ratio	0.51	0.51	0.51	0.51	0.51	0.51	0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	89	1333	537	101	1333	522	83	549	440	165	545	545
v/s Ratio Prot		0.44			0.47			0.33				c0.44
v/s Ratio Perm	0.20		0.05	c0.56		0.04	0.39		0.13	0.24		
v/c Ratio	0.39	0.87	0.10	1.10	0.92	0.07	0.99	0.82	0.32	0.59	1.11	
Uniform Delay, d1	13.5	19.4	11.4	22.0	20.3	11.2	26.8	24.2	18.6	21.2	27.0	
Progression Factor	1.26	1.07	2.72	1.15	1.04	1.58	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.5	2.4	0.1	58.2	1.3	0.0	93.9	9.7	0.4	5.3	71.8	
Delay (s)	20.4	23.1	31.0	83.5	22.4	17.7	120.7	33.9	19.0	26.4	98.8	
Level of Service	C	C	C	F	C	B	F	C	B	C	F	
Approach Delay (s)		23.6			27.0			40.5			88.8	
Approach LOS		C			C			D			F	

Intersection Summary			
HCM Average Control Delay	38.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	113.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕		↔	↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2590		1304	2540		1304	2554		1304	2538	
Flt Permitted	0.14	1.00		0.18	1.00		0.28	1.00		0.17	1.00	
Satd. Flow (perm)	193	2590		243	2540		382	2554		234	2538	
Volume (vph)	60	975	46	102	1194	252	80	800	127	83	584	127
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	62	1005	47	105	1231	260	82	825	131	86	602	131
RTOR Reduction (vph)	0	6	0	0	30	0	0	21	0	0	20	0
Lane Group Flow (vph)	62	1046	0	105	1461	0	82	935	0	86	713	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			8		4
Permitted Phases	2			6			8			8		4
Actuated Green, G (s)	28.0	28.0		28.0	28.0		23.0	23.0		23.0	23.0	
Effective Green, g (s)	28.5	28.5		28.5	28.5		23.5	23.5		23.5	23.5	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.39	0.39		0.39	0.39	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	92	1230		115	1207		150	1000		92	994	
v/s Ratio Prot		0.40			c0.58			0.37			0.28	
v/s Ratio Perm	0.32			0.43			0.21			c0.37		
v/c Ratio	0.67	0.85		0.91	1.21		0.55	0.93		0.93	0.72	
Uniform Delay, d1	12.2	13.9		14.6	15.8		14.1	17.5		17.5	15.4	
Progression Factor	0.55	0.60		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	20.7	4.5		63.0	102.6		13.6	16.5		77.2	4.4	
Delay (s)	27.3	12.8		77.6	118.4		27.7	34.0		94.7	19.9	
Level of Service	C	B		E	F		C	C		F	B	
Approach Delay (s)		13.6			115.7			33.5			27.7	
Approach LOS		B			F			C			C	

Intersection Summary

HCM Average Control Delay	56.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	119.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2576		1304	2578		1293	1318		1288	1346	
Flt Permitted	0.13	1.00		0.09	1.00		0.25	1.00		0.30	1.00	
Satd. Flow (perm)	182	2576		123	2578		339	1318		410	1346	
Volume (vph)	29	1147	69	67	1016	50	5	268	70	103	337	38
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	35	1382	83	81	1224	60	6	323	84	124	406	46
RTOR Reduction (vph)	0	4	0	0	3	0	0	11	0	0	5	0
Lane Group Flow (vph)	35	1461	0	81	1281	0	6	396	0	124	447	0
Confl. Peds. (#/hr)	31		38	38		31	20		23	23		20
Confl. Bikes (#/hr)						2			2			4
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	50.2	50.2		50.2	50.2		30.7	30.7		30.7	30.7	
Effective Green, g (s)	50.8	50.8		50.8	50.8		31.2	31.2		31.2	31.2	
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.35	0.35		0.35	0.35	
Clearance Time (s)	4.6	4.6		4.6	4.6		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	103	1454		69	1455		118	457		142	467	
v/s Ratio Prot		0.57			0.50			0.30			c0.33	
v/s Ratio Perm	0.19			c0.66			0.02			0.30		
v/c Ratio	0.34	1.00		1.17	0.88		0.05	0.87		0.87	0.96	
Uniform Delay, d1	10.6	19.6		19.6	17.0		19.6	27.5		27.5	28.7	
Progression Factor	0.96	1.07		1.23	1.28		0.69	0.70		1.00	1.00	
Incremental Delay, d2	8.0	23.6		124.2	3.5		0.1	14.7		39.5	30.3	
Delay (s)	18.1	44.7		148.4	25.2		13.5	34.0		67.1	59.1	
Level of Service	B	D		F	C		B	C		E	E	
Approach Delay (s)		44.0			32.5			33.7			60.8	
Approach LOS		D			C			C			E	

Intersection Summary			
HCM Average Control Delay	41.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↑	↕	↕	↕	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1660	1417		1649	1417	1583	1667	1417	1583	1646	
Flt Permitted		0.95	1.00		0.77	1.00	0.39	1.00	1.00	0.50	1.00	
Satd. Flow (perm)		1585	1417		1277	1417	654	1667	1417	828	1646	
Volume (vph)	16	197	68	64	232	36	60	307	67	16	393	36
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	19	235	81	76	276	43	71	365	80	19	468	43
RTOR Reduction (vph)	0	0	57	0	0	30	0	0	31	0	3	0
Lane Group Flow (vph)	0	254	24	0	352	13	71	365	49	19	508	0
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4		4	2		2	2		
Actuated Green, G (s)		26.0	26.0		26.0	26.0	55.0	55.0	55.0	55.0	55.0	
Effective Green, g (s)		26.5	26.5		26.5	26.5	55.5	55.5	55.5	55.5	55.5	
Actuated g/C Ratio		0.29	0.29		0.29	0.29	0.62	0.62	0.62	0.62	0.62	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	0.2	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)		467	417		376	417	403	1028	874	511	1015	
v/s Ratio Prot								0.22			c0.31	
v/s Ratio Perm		0.16	0.02		c0.28	0.01	0.11		0.03	0.02		
v/c Ratio		0.54	0.06		0.94	0.03	0.18	0.36	0.06	0.04	0.50	
Uniform Delay, d1		26.7	22.8		30.9	22.6	7.4	8.5	6.9	6.8	9.6	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.95	0.75	
Incremental Delay, d2		1.3	0.1		30.3	0.0	1.0	1.0	0.1	0.0	0.2	
Delay (s)		28.0	22.8		61.3	22.6	8.4	9.4	7.0	6.5	7.4	
Level of Service		C	C		E	C	A	A	A	A	A	
Approach Delay (s)		26.7			57.0			8.9			7.3	
Approach LOS		C			E			A			A	

Intersection Summary

HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2586		1304	2588		1304	1287		1304	1352	
Flt Permitted	0.16	1.00		0.23	1.00		0.34	1.00		0.25	1.00	
Satd. Flow (perm)	215	2586		317	2588		468	1287		342	1352	
Volume (vph)	40	754	46	252	947	49	68	314	221	80	400	44
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	43	811	49	271	1018	53	73	338	238	86	430	47
RTOR Reduction (vph)	0	7	0	0	6	0	0	41	0	0	7	0
Lane Group Flow (vph)	43	853	0	271	1065	0	73	535	0	86	470	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	25.0	25.0		25.0	25.0		26.0	26.0		26.0	26.0	
Effective Green, g (s)	25.5	25.5		25.5	25.5		26.5	26.5		26.5	26.5	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.44	0.44		0.44	0.44	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	91	1099		135	1100		207	568		151	597	
v/s Ratio Prot		0.33			0.41			c0.42			0.35	
v/s Ratio Perm	0.20			c0.85			0.16			0.25		
v/c Ratio	0.47	0.78		2.01	0.97		0.35	0.94		0.57	0.79	
Uniform Delay, d1	12.4	14.8		17.2	16.9		11.1	16.0		12.5	14.3	
Progression Factor	1.00	1.00		0.51	0.50		1.00	1.00		1.00	1.00	
Incremental Delay, d2	16.6	5.4		455.7	3.6		0.4	24.0		2.9	6.3	
Delay (s)	29.0	20.2		464.5	12.1		11.5	40.0		15.4	20.6	
Level of Service	C	C		F	B		B	D		B	C	
Approach Delay (s)		20.6			103.4			36.8			19.8	
Approach LOS		C			F			D			B	

Intersection Summary

HCM Average Control Delay	55.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	111.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↗	↕			↕	↗		↕	↗
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Volume (veh/h)	19	1104	98	62	1003	63	30	54	71	15	34	44
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	22	1284	114	72	1166	73	35	63	83	17	40	51
Pedestrians	20			26			69			72		
Lane Width (ft)	12.0			12.0			12.0			12.0		
Walking Speed (ft/s)	4.0			4.0			4.0			4.0		
Percent Blockage	2			2			6			6		
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)	801				400							
pX, platoon unblocked	0.63			0.83			0.72	0.72	0.83	0.72	0.72	0.63
vC, conflicting volume	1312			1467			2272	2910	794	2245	2930	712
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	911			1356			1659	2546	542	1621	2574	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			82			0	0	78	0	0	92
cM capacity (veh/h)	442			393			0	13	370	0	13	634

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	22	856	542	72	778	462	98	83	57	51
Volume Left	22	0	0	72	0	0	35	0	17	0
Volume Right	0	0	114	0	0	73	0	83	0	51
cSH	442	1700	1700	393	1700	1700	0	370	0	634
Volume to Capacity	0.05	0.50	0.32	0.18	0.46	0.27	Err	0.22	Err	0.08
Queue Length 95th (ft)	4	0	0	17	0	0	Err	21	Err	7
Control Delay (s)	13.6	0.0	0.0	16.2	0.0	0.0	Err	17.5	Err	11.2
Lane LOS	B			C			F	C	F	B
Approach Delay (s)	0.2			0.9			Err		Err	
Approach LOS							F		F	

Intersection Summary

Average Delay	Err	
Intersection Capacity Utilization	75.6%	ICU Level of Service D
Analysis Period (min)	15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗	↘	↘	↗	↘	↘	↗	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.91	1.00	1.00	0.77	1.00	1.00	0.94	1.00	1.00	0.94
Flpb, ped/bikes	0.98	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1276	2608	1062	1286	2608	902	1277	1373	1094	1268	1373	1098
Flt Permitted	0.22	1.00	1.00	0.23	1.00	1.00	0.29	1.00	1.00	0.41	1.00	1.00
Satd. Flow (perm)	290	2608	1062	306	2608	902	385	1373	1094	546	1373	1098
Volume (vph)	32	882	46	39	908	39	48	265	79	108	346	38
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	36	1002	52	44	1032	44	55	301	90	123	393	43
RTOR Reduction (vph)	0	0	21	0	0	18	0	0	40	0	0	29
Lane Group Flow (vph)	36	1002	31	44	1032	26	55	301	50	123	393	14
Conf. Peds. (#/hr)	55		55	55		88	47		49	49		47
Conf. Bikes (#/hr)			3			5			4			1
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		2			6			8				4
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	52.9	52.9	52.9	52.9	52.9	52.9	28.1	28.1	28.1	28.1	28.1	28.1
Effective Green, g (s)	53.4	53.4	53.4	53.4	53.4	53.4	28.6	28.6	28.6	28.6	28.6	28.6
Actuated g/C Ratio	0.59	0.59	0.59	0.59	0.59	0.59	0.32	0.32	0.32	0.32	0.32	0.32
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	172	1547	630	182	1547	535	122	436	348	174	436	349
v/s Ratio Prot		0.38			c0.40			0.22				c0.29
v/s Ratio Perm	0.12		0.03	0.14		0.03	0.14		0.05	0.23		0.01
v/c Ratio	0.21	0.65	0.05	0.24	0.67	0.05	0.45	0.69	0.14	0.71	0.90	0.04
Uniform Delay, d1	8.5	12.1	7.7	8.7	12.3	7.7	24.4	26.8	21.9	27.0	29.4	21.2
Progression Factor	1.62	1.47	2.90	0.54	0.59	0.42	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6	1.2	0.1	1.8	1.3	0.1	1.0	3.8	0.1	10.2	21.0	0.0
Delay (s)	15.3	19.1	22.3	6.5	8.6	3.3	25.4	30.6	22.0	37.2	50.4	21.2
Level of Service	B	B	C	A	A	A	C	C	C	D	D	C
Approach Delay (s)		19.1			8.3			28.2			45.2	
Approach LOS		B			A			C			D	

Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↕		↕	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	0.97		1.00	1.00	
Flt Protected		1.00	1.00		0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1659	1417		1651	1417	1583	1615		1583	1661	
Flt Permitted		0.96	1.00		0.91	1.00	0.51	1.00		0.47	1.00	
Satd. Flow (perm)		1605	1417		1523	1417	849	1615		780	1661	
Volume (vph)	14	142	44	36	156	64	24	346	90	32	371	9
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	14	146	45	37	161	66	25	357	93	33	382	9
RTOR Reduction (vph)	0	0	36	0	0	53	0	11	0	0	1	0
Lane Group Flow (vph)	0	160	9	0	198	13	25	439	0	33	390	0
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4		4	2			2		
Actuated Green, G (s)		11.7	11.7		11.7	11.7	39.3	39.3		39.3	39.3	
Effective Green, g (s)		12.2	12.2		12.2	12.2	39.8	39.8		39.8	39.8	
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.66	0.66		0.66	0.66	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		2.0	2.0		2.0	2.0	0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		326	288		310	288	563	1071		517	1102	
v/s Ratio Prot							c0.27				0.23	
v/s Ratio Perm		0.10	0.01		c0.13	0.01	0.03			0.04		
v/c Ratio		0.49	0.03		0.64	0.05	0.04	0.41		0.06	0.35	
Uniform Delay, d1		21.2	19.2		21.9	19.2	3.5	4.7		3.6	4.4	
Progression Factor		1.00	1.00		1.00	1.00	1.90	2.11		1.00	1.00	
Incremental Delay, d2		0.4	0.0		3.2	0.0	0.1	0.8		0.2	0.9	
Delay (s)		21.6	19.2		25.0	19.2	6.8	10.6		3.8	5.3	
Level of Service		C	B		C	B	A	B		A	A	
Approach Delay (s)		21.1			23.6			10.4			5.2	
Approach LOS		C			C			B			A	

Intersection Summary

HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↖	↗	↗	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2573		1304	2566		1304	1373	1167	1304	1373	1167
Flt Permitted	0.36	1.00		0.26	1.00		0.40	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	496	2573		353	2566		548	1373	1167	471	1373	1167
Volume (vph)	33	752	74	166	549	66	97	362	100	56	321	40
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	817	80	180	597	72	105	393	109	61	349	43
RTOR Reduction (vph)	0	10	0	0	13	0	0	0	59	0	0	29
Lane Group Flow (vph)	36	887	0	180	656	0	105	393	50	61	349	14
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		2			6			8				4
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	31.3	31.3		31.3	31.3		19.7	19.7	19.7	19.7	19.7	19.7
Effective Green, g (s)	31.8	31.8		31.8	31.8		20.2	20.2	20.2	20.2	20.2	20.2
Actuated g/C Ratio	0.53	0.53		0.53	0.53		0.34	0.34	0.34	0.34	0.34	0.34
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	263	1364		187	1360		184	462	393	159	462	393
v/s Ratio Prot		0.34			0.26			c0.29				0.25
v/s Ratio Perm	0.07			c0.51			0.19		0.04	0.13		0.01
v/c Ratio	0.14	0.65		0.96	0.48		0.57	0.85	0.13	0.38	0.76	0.04
Uniform Delay, d1	7.1	10.1		13.5	8.9		16.3	18.5	13.8	15.2	17.7	13.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.71	0.81	0.53
Incremental Delay, d2	1.1	2.4		56.7	1.2		2.6	13.5	0.1	0.5	5.9	0.0
Delay (s)	8.2	12.5		70.2	10.1		19.0	32.0	13.8	11.3	20.2	7.1
Level of Service	A	B		E	B		B	C	B	B	C	A
Approach Delay (s)		12.4			22.9			26.5			17.7	
Approach LOS		B			C			C			B	

Intersection Summary

























HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↘	↘	↑↑		↘	↑	↘	↘	↑	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2608	1167	1304	2594		1304	1373	1167	1304	1373	1167
Flt Permitted	0.13	1.00	1.00	0.15	1.00		0.26	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	173	2608	1167	207	2594		355	1373	1167	501	1373	1167
Volume (vph)	40	1002	32	19	1039	38	67	309	43	113	388	30
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	48	1193	38	23	1237	45	80	368	51	135	462	36
RTOR Reduction (vph)	0	0	17	0	2	0	0	0	20	0	0	18
Lane Group Flow (vph)	48	1193	21	23	1280	0	80	368	31	135	462	18
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		Perm
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	48.6	48.6	48.6	48.6	48.6		32.3	32.3	32.3	32.3	32.3	32.3
Effective Green, g (s)	49.2	49.2	49.2	49.2	49.2		32.8	32.8	32.8	32.8	32.8	32.8
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.55		0.36	0.36	0.36	0.36	0.36	0.36
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	95	1426	638	113	1418		129	500	425	183	500	425
v/s Ratio Prot		0.46			c0.49			0.27				c0.34
v/s Ratio Perm	0.28		0.02	0.11			0.23		0.03	0.27		0.02
v/c Ratio	0.51	0.84	0.03	0.20	0.90		0.62	0.74	0.07	0.74	0.92	0.04
Uniform Delay, d1	12.8	17.0	9.4	10.4	18.3		23.5	24.8	18.7	24.9	27.4	18.5
Progression Factor	1.27	1.37	1.36	1.07	0.77		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	17.7	5.9	0.1	3.4	8.4		6.5	4.8	0.0	12.5	22.6	0.0
Delay (s)	34.0	29.3	12.9	14.6	22.5		30.0	29.7	18.7	37.4	50.0	18.5
Level of Service	C	C	B	B	C		C	C	B	D	D	B
Approach Delay (s)		29.0			22.3			28.6			45.5	
Approach LOS		C			C			C			D	

Intersection Summary

HCM Average Control Delay	29.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	0.97
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2608	1167	1304	2608	1167	1304	1373	1167	1304	2534	2534
Flt Permitted	0.39	1.00	1.00	0.39	1.00	1.00	0.16	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	536	2608	1167	533	2608	1167	220	1373	1167	153	2534	2534
Volume (vph)	106	531	331	38	527	37	268	857	38	22	709	166
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	577	360	41	573	40	291	932	41	24	771	180
RTOR Reduction (vph)	0	0	41	0	0	20	0	0	19	0	22	0
Lane Group Flow (vph)	115	577	319	41	573	20	291	932	22	24	929	0
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	45.5	45.5	45.5	45.5	45.5	45.5	35.5	35.5	35.5	35.5	35.5	35.5
Effective Green, g (s)	46.0	46.0	46.0	46.0	46.0	46.0	36.0	36.0	36.0	36.0	36.0	36.0
Actuated g/C Ratio	0.51	0.51	0.51	0.51	0.51	0.51	0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	274	1333	596	272	1333	596	88	549	467	61	1014	1014
v/s Ratio Prot		0.22			0.22			0.68			0.37	
v/s Ratio Perm	0.21		c0.27	0.08		0.02	c1.32		0.02	0.16		
v/c Ratio	0.42	0.43	0.54	0.15	0.43	0.03	3.31	1.70	0.05	0.39	0.92	
Uniform Delay, d1	13.7	13.8	14.8	11.7	13.8	10.9	27.0	27.0	16.5	19.2	25.6	
Progression Factor	1.27	1.34	1.37	0.28	0.36	0.07	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.5	0.8	2.5	0.6	0.5	0.1	1066.6	321.7	0.0	1.5	12.2	
Delay (s)	20.8	19.3	22.8	3.8	5.4	0.9	1093.6	348.7	16.5	20.7	37.8	
Level of Service	C	B	C	A	A	A	F	F	B	C	D	
Approach Delay (s)		20.7			5.0			509.4			37.4	
Approach LOS		C			A			F			D	

Intersection Summary

HCM Average Control Delay	178.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	106.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↘	↕	↗	↘	↕		↘	↕	↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2541		1304	1373	1167	1304	2572		1304	2604	
Flt Permitted	0.31	1.00		0.43	1.00	1.00	0.18	1.00		0.15	1.00	
Satd. Flow (perm)	432	2541		584	1373	1167	246	2572		211	2604	
Volume (vph)	10	398	82	91	463	94	97	979	99	62	912	10
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	11	428	88	98	498	101	104	1053	106	67	981	11
RTOR Reduction (vph)	0	29	0	0	0	23	0	12	0	0	1	0
Lane Group Flow (vph)	11	487	0	98	498	78	104	1147	0	67	991	0
Turn Type	Perm			Perm			Perm	Perm		Perm		
Protected Phases	2			6			8			4		
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	25.5	25.5		25.5	25.5	25.5	25.5	25.5		25.5	25.5	
Effective Green, g (s)	26.0	26.0		26.0	26.0	26.0	26.0	26.0		26.0	26.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43	0.43	0.43	0.43		0.43	0.43	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	187	1101		253	595	506	107	1115		91	1128	
v/s Ratio Prot	0.19			c0.36			c0.45			0.38		
v/s Ratio Perm	0.03			0.17			0.42			0.32		
v/c Ratio	0.06	0.44		0.39	0.84	0.15	0.97	1.03		0.74	0.88	
Uniform Delay, d1	9.9	11.9		11.6	15.1	10.3	16.6	17.0		14.1	15.6	
Progression Factor	0.50	0.42		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	1.2		4.4	13.2	0.6	77.4	34.4		23.1	7.7	
Delay (s)	5.5	6.3		16.0	28.3	11.0	94.0	51.4		37.3	23.3	
Level of Service	A			B		C		D		D		C
Approach Delay (s)	6.2			24.0		54.9		24.2				
Approach LOS	A			C		D		C				

Intersection Summary

HCM Average Control Delay	32.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗			↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.96			0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1304	2583		1304	2583		1304	1314			1352	
Flt Permitted	0.19	1.00		0.24	1.00		0.38	1.00			0.86	
Satd. Flow (perm)	258	2583		325	2583		528	1314			1168	
Volume (vph)	21	738	50	74	840	58	25	211	84	99	408	23
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	22	769	52	77	875	60	26	220	88	103	425	24
RTOR Reduction (vph)	0	5	0	0	5	0	0	17	0	0	2	0
Lane Group Flow (vph)	22	816	0	77	930	0	26	291	0	0	550	0
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases	2		6		6		8		8			4
Permitted Phases	2		6		6		8		8			4
Actuated Green, G (s)	38.7	38.7		38.7	38.7		42.3	42.3			42.3	
Effective Green, g (s)	39.2	39.2		39.2	39.2		42.8	42.8			42.8	
Actuated g/C Ratio	0.44	0.44		0.44	0.44		0.48	0.48			0.48	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5			4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)	112	1125		142	1125		251	625			555	
v/s Ratio Prot		0.32			c0.36			0.22				
v/s Ratio Perm	0.09			0.24			0.05				c0.47	
v/c Ratio	0.20	0.73		0.54	0.83		0.10	0.47			0.99	
Uniform Delay, d1	15.7	21.0		18.8	22.4		13.0	15.9			23.4	
Progression Factor	1.28	1.04		1.07	1.09		1.00	1.00			1.00	
Incremental Delay, d2	3.7	3.9		1.3	0.7		0.1	0.2			35.7	
Delay (s)	23.8	25.7		21.4	25.1		13.1	16.1			59.1	
Level of Service	C	C		C	C		B	B			E	
Approach Delay (s)		25.7			24.8			15.9			59.1	
Approach LOS		C			C			B			E	

Intersection Summary

HCM Average Control Delay	30.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕↔		↔	↕	↔	↔	↕		↔	↕↔	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2576		1304	1373	1167	1304	1362		1304	1368	
Flt Permitted	0.35	1.00		0.45	1.00	1.00	0.30	1.00		0.33	1.00	
Satd. Flow (perm)	483	2576		619	1373	1167	416	1362		450	1368	
Volume (vph)	18	424	37	17	464	78	18	390	20	35	421	9
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	19	456	40	18	499	84	19	419	22	38	453	10
RTOR Reduction (vph)	0	10	0	0	0	43	0	4	0	0	1	0
Lane Group Flow (vph)	19	486	0	18	499	41	19	437	0	38	462	0
Turn Type	Perm			Perm			Perm	Perm		Perm		
Protected Phases	2			6			6	8		8		4
Permitted Phases	2			6			6	8		4		
Actuated Green, G (s)	28.7	28.7		28.7	28.7	28.7	22.3	22.3		22.3	22.3	
Effective Green, g (s)	29.2	29.2		29.2	29.2	29.2	22.8	22.8		22.8	22.8	
Actuated g/C Ratio	0.49	0.49		0.49	0.49	0.49	0.38	0.38		0.38	0.38	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	235	1254		301	668	568	158	518		171	520	
v/s Ratio Prot	0.19			c0.36			0.32			c0.34		
v/s Ratio Perm	0.04			0.03			0.04	0.05		0.08		
v/c Ratio	0.08	0.39		0.06	0.75	0.07	0.12	0.84		0.22	0.89	
Uniform Delay, d1	8.2	9.7		8.1	12.4	8.2	12.1	17.0		12.6	17.4	
Progression Factor	1.00	1.00		1.09	0.81	1.36	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.9		0.2	3.7	0.1	0.1	11.5		0.2	16.3	
Delay (s)	8.9	10.7		9.1	13.8	11.3	12.2	28.5		12.8	33.7	
Level of Service	A	B		A	B	B	B	C		B	C	
Approach Delay (s)	10.6			13.3			27.8			32.1		
Approach LOS	B			B			C			C		

Intersection Summary

HCM Average Control Delay	20.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑	↗	↙	↑↑		↙	↑	↗	↙	↗	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frbp, ped/bikes	1.00	1.00	0.80	1.00	0.99		1.00	1.00	0.93	1.00	1.00	
Flpb, ped/bikes	0.96	1.00	1.00	0.93	1.00		0.97	1.00	1.00	0.96	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1254	2608	937	1213	2568		1270	1373	1083	1256	1355	
Flt Permitted	0.28	1.00	1.00	0.40	1.00		0.52	1.00	1.00	0.45	1.00	
Satd. Flow (perm)	364	2608	937	508	2568		698	1373	1083	598	1355	
Volume (vph)	13	603	45	40	852	41	107	194	63	83	153	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	14	635	47	42	897	43	113	204	66	87	161	11
RTOR Reduction (vph)	0	0	14	0	2	0	0	0	53	0	4	0
Lane Group Flow (vph)	14	635	33	42	938	0	113	204	13	87	168	0
Conf. Peds. (#/hr)	71		75	75		71	33		50	50		33
Conf. Bikes (#/hr)			7			6			7			6
Turn Type	Perm		Perm	Perm		Perm		Perm	Perm	Perm		
Protected Phases		2			6		8				4	
Permitted Phases	2		2	6		8		8		4		
Actuated Green, G (s)	63.2	63.2	63.2	63.2	63.2	17.8	17.8	17.8	17.8	17.8	17.8	
Effective Green, g (s)	63.7	63.7	63.7	63.7	63.7	18.3	18.3	18.3	18.3	18.3	18.3	
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.71	0.20	0.20	0.20	0.20	0.20	0.20	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	258	1846	663	360	1818	142	279	220	122	276		
v/s Ratio Prot		0.24			c0.37			0.15			0.12	
v/s Ratio Perm	0.04		0.04	0.08		c0.16		0.01		0.15		
v/c Ratio	0.05	0.34	0.05	0.12	0.52	0.80	0.73	0.06	0.71	0.61		
Uniform Delay, d1	4.0	5.1	4.0	4.2	6.1	34.1	33.5	28.9	33.4	32.6		
Progression Factor	0.79	0.72	0.78	2.05	2.05	1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	0.4	0.5	0.1	0.4	0.7	24.2	8.2	0.0	15.1	2.6		
Delay (s)	3.5	4.1	3.2	9.0	13.1	58.3	41.8	29.0	48.5	35.2		
Level of Service	A	A	A	A	B	E	D	C	D	D		
Approach Delay (s)		4.0			12.9		44.4			39.7		
Approach LOS		A			B		D			D		

Intersection Summary

HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↖	↖		↖	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes		1.00	0.93		0.99		1.00	0.98		1.00	1.00	0.93
Flpb, ped/bikes		0.99	1.00		0.99		0.97	1.00		0.96	1.00	1.00
Frt		1.00	0.85		0.98		1.00	0.97		1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1639	1323		1573		1541	1583		1514	1667	1319
Flt Permitted		0.95	1.00		0.88		0.50	1.00		0.61	1.00	1.00
Satd. Flow (perm)		1565	1323		1408		811	1583		970	1667	1319
Volume (vph)	14	65	69	51	101	23	32	180	51	12	394	18
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	15	68	72	53	105	24	33	188	53	12	410	19
RTOR Reduction (vph)	0	0	58	0	13	0	0	10	0	0	0	6
Lane Group Flow (vph)	0	83	14	0	169	0	33	231	0	12	410	13
Confl. Peds. (#/hr)	38		55	55		38	31		39	39		31
Confl. Bikes (#/hr)						1						2
Turn Type	Perm		Perm	Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)		10.9	10.9		10.9		40.1	40.1		40.1	40.1	40.1
Effective Green, g (s)		11.4	11.4		11.4		40.6	40.6		40.6	40.6	40.6
Actuated g/C Ratio		0.19	0.19		0.19		0.68	0.68		0.68	0.68	0.68
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		297	251		268		549	1071		656	1128	893
v/s Ratio Prot								0.15			c0.25	
v/s Ratio Perm		0.05	0.01		c0.12		0.04			0.01		0.01
v/c Ratio		0.28	0.05		0.63		0.06	0.22		0.02	0.36	0.01
Uniform Delay, d1		20.8	19.9		22.4		3.3	3.7		3.2	4.2	3.2
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.2	0.0		3.5		0.2	0.5		0.1	0.9	0.0
Delay (s)		21.0	19.9		25.9		3.5	4.1		3.2	5.1	3.2
Level of Service		C	B		C		A	A		A	A	A
Approach Delay (s)		20.5			25.9			4.1			4.9	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗	↘	↘	↗	↘	↘	↗	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.84	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.83
Flpb, ped/bikes	0.94	1.00	1.00	0.98	1.00	1.00	0.95	1.00	1.00	0.93	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1229	2608	982	1284	2608	989	1236	1373	994	1218	1373	966
Flt Permitted	0.40	1.00	1.00	0.34	1.00	1.00	0.26	1.00	1.00	0.40	1.00	1.00
Satd. Flow (perm)	521	2608	982	456	2608	989	338	1373	994	508	1373	966
Volume (vph)	24	525	103	186	609	117	57	318	73	59	430	18
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	26	565	111	200	655	126	61	342	78	63	462	19
RTOR Reduction (vph)	0	0	63	0	0	57	0	0	49	0	0	12
Lane Group Flow (vph)	26	565	48	200	655	69	61	342	29	63	462	7
Confl. Peds. (#/hr)	101		105	105		101	121		103	103		121
Turn Type	Perm		Perm	pm+pt		Perm	Perm		Perm	Perm		Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	38.6	38.6	38.6	48.6	48.6	48.6	32.4	32.4	32.4	32.4	32.4	32.4
Effective Green, g (s)	39.1	39.1	39.1	49.1	49.1	49.1	32.9	32.9	32.9	32.9	32.9	32.9
Actuated g/C Ratio	0.43	0.43	0.43	0.55	0.55	0.55	0.37	0.37	0.37	0.37	0.37	0.37
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	226	1133	427	304	1423	540	124	502	363	186	502	353
v/s Ratio Prot		0.22		c0.04	0.25			0.25			c0.34	
v/s Ratio Perm	0.05		0.05	c0.32		0.07	0.18		0.03	0.12		0.01
v/c Ratio	0.12	0.50	0.11	0.66	0.46	0.13	0.49	0.68	0.08	0.34	0.92	0.02
Uniform Delay, d1	15.2	18.4	15.1	13.4	12.4	10.0	22.1	24.1	18.6	20.7	27.3	18.2
Progression Factor	1.18	1.18	1.84	1.14	1.04	0.96	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	1.5	0.5	3.3	0.9	0.4	1.1	3.0	0.0	0.4	22.0	0.0
Delay (s)	18.9	23.2	28.3	18.6	13.8	10.0	23.2	27.2	18.7	21.1	49.3	18.3
Level of Service	B	C	C	B	B	A	C	C	B	C	D	B
Approach Delay (s)		23.9			14.3			25.3			44.9	
Approach LOS		C			B			C			D	

Intersection Summary

HCM Average Control Delay	24.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↗	↖	↗	↗	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00	1.00	1.00	0.95	
Frbp, ped/bikes		0.95			0.98		1.00	1.00	0.90	1.00	1.00	
Flpb, ped/bikes		1.00			0.99		0.98	1.00	1.00	0.96	1.00	
Frt		0.91			0.95		1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00			0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1433			1541		1548	1667	1278	1524	3139	
Flt Permitted		0.99			0.95		0.31	1.00	1.00	0.42	1.00	
Satd. Flow (perm)		1418			1478		499	1667	1278	667	3139	
Volume (vph)	6	38	91	38	159	99	36	367	28	29	643	24
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	6	41	98	41	171	106	39	395	30	31	691	26
RTOR Reduction (vph)	0	56	0	0	30	0	0	0	17	0	5	0
Lane Group Flow (vph)	0	89	0	0	288	0	39	395	13	31	712	0
Conf. Peds. (#/hr)	41		59	59		41	38		42	42		38
Conf. Bikes (#/hr)			4			7			1			3
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		2			6			8				4
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		25.5			25.5		25.5	25.5	25.5	25.5	25.5	
Effective Green, g (s)		26.0			26.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio		0.43			0.43		0.43	0.43	0.43	0.43	0.43	0.43
Clearance Time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)		614			640		216	722	554	289	1360	
v/s Ratio Prot							c0.24				0.23	
v/s Ratio Perm		0.06			c0.19		0.08		0.01	0.05		
v/c Ratio		0.15			0.45		0.18	0.55	0.02	0.11	0.52	
Uniform Delay, d1		10.3			12.0		10.5	12.6	9.7	10.1	12.5	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5			2.3		1.8	3.0	0.1	0.7	1.4	
Delay (s)		10.8			14.2		12.3	15.6	9.8	10.8	13.9	
Level of Service		B			B		B	B	A	B	B	
Approach Delay (s)		10.8			14.2			14.9			13.8	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM Average Control Delay			13.9				HCM Level of Service			B		
HCM Volume to Capacity ratio			0.50									
Actuated Cycle Length (s)			60.0				Sum of lost time (s)		8.0			
Intersection Capacity Utilization			70.2%				ICU Level of Service		C			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑		↑	↑	↑	↑	↑	↑	↑↓	↑
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00	1.00		1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1373	1167		1373	1167	1304	1373	1167	1304	2594	
Flt Permitted		1.00	1.00		1.00	1.00	0.20	1.00	1.00	0.14	1.00	
Satd. Flow (perm)		1373	1167		1373	1167	270	1373	1167	186	2594	
Volume (vph)	0	202	56	0	156	61	30	533	45	91	730	28
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	220	61	0	170	66	33	579	49	99	793	30
RTOR Reduction (vph)	0	0	46	0	0	50	0	0	31	0	3	0
Lane Group Flow (vph)	0	220	15	0	170	16	33	579	18	99	820	0
Turn Type		Perm			Perm		Perm		Perm		Perm	
Protected Phases		2			6			8			4	
Permitted Phases		2			6		8		8		4	
Actuated Green, G (s)		20.5	20.5		20.5	20.5	30.5	30.5	30.5	30.5	30.5	
Effective Green, g (s)		21.0	21.0		21.0	21.0	31.0	31.0	31.0	31.0	31.0	
Actuated g/C Ratio		0.25	0.25		0.25	0.25	0.36	0.36	0.36	0.36	0.36	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)		339	288		339	288	98	501	426	68	946	
v/s Ratio Prot		c0.16			c0.12			0.42			0.32	
v/s Ratio Perm		0.01			0.01		0.12		0.02		c0.53	
v/c Ratio		0.65	0.05		0.50	0.06	0.34	1.16	0.04	1.46	0.87	
Uniform Delay, d1		28.7	24.4		27.5	24.4	19.6	27.0	17.4	27.0	25.1	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		9.3	0.3		5.2	0.4	9.1	90.7	0.2	269.5	10.5	
Delay (s)		38.0	24.8		32.7	24.8	28.6	117.7	17.6	296.5	35.6	
Level of Service		D	C		C	C	C	F	B	F	D	
Approach Delay (s)		35.1			30.5			105.8			63.6	
Approach LOS		D			C			F			E	

Intersection Summary

HCM Average Control Delay	69.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
181: Wilshire Blvd & 3rd St



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↑↑		↖	↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.88		1.00	0.92
Flpb, ped/bikes	0.85	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.91		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1112	2608	2094		1304	1074
Flt Permitted	0.63	1.00	1.00		0.95	1.00
Satd. Flow (perm)	734	2608	2094		1304	1074
Volume (vph)	41	489	78	104	159	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	532	85	113	173	11
RTOR Reduction (vph)	0	0	32	0	0	9
Lane Group Flow (vph)	45	532	166	0	173	2
Conf. Peds. (#/hr)	82			82	87	61
Conf. Bikes (#/hr)				7		3
Turn Type	Perm				Perm	
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	64.0	64.0	64.0		17.0	17.0
Effective Green, g (s)	64.5	64.5	64.5		17.5	17.5
Actuated g/C Ratio	0.72	0.72	0.72		0.19	0.19
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	526	1869	1501		254	209
v/s Ratio Prot		c0.20	0.08		c0.13	
v/s Ratio Perm	0.06					0.00
v/c Ratio	0.09	0.28	0.11		0.68	0.01
Uniform Delay, d1	3.8	4.5	3.9		33.7	29.3
Progression Factor	0.67	0.70	1.83		1.00	1.00
Incremental Delay, d2	0.3	0.3	0.1		5.9	0.0
Delay (s)	2.8	3.5	7.3		39.5	29.3
Level of Service	A	A	A		D	C
Approach Delay (s)		3.5	7.3		38.9	
Approach LOS		A	A		D	
Intersection Summary						
HCM Average Control Delay			11.1		HCM Level of Service	B
HCM Volume to Capacity ratio			0.37			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			52.2%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘		↖	↗	↖	↗	↘	↖	↗	↘
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	1667	1417		1650	1417	1583	1667	1417	1583	1667	1417
Flt Permitted	0.57	1.00	1.00		0.91	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	956	1667	1417		1524	1417	1583	1667	1417	1583	1667	1417
Volume (vph)	22	177	323	34	135	37	156	587	35	20	636	189
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	192	351	37	147	40	170	638	38	22	691	205
RTOR Reduction (vph)	0	0	47	0	0	27	0	0	18	0	0	124
Lane Group Flow (vph)	24	192	304	0	184	13	170	638	20	22	691	81
Turn Type	Perm		pm+ov	Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases		2	3		6		3	8		7	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	28.0	28.0	41.3		28.0	28.0	13.3	46.1	46.1	2.4	35.2	35.2
Effective Green, g (s)	28.5	28.5	42.3		28.5	28.5	13.8	46.6	46.6	2.9	35.7	35.7
Actuated g/C Ratio	0.32	0.32	0.47		0.32	0.32	0.15	0.52	0.52	0.03	0.40	0.40
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	1.0	3.0	3.0
Lane Grp Cap (vph)	303	528	729		483	449	243	863	734	51	661	562
v/s Ratio Prot		0.12	c0.06				c0.11	0.38		0.01	c0.41	
v/s Ratio Perm	0.03		0.15		0.12	0.01			0.01			0.06
v/c Ratio	0.08	0.36	0.42		0.38	0.03	0.70	0.74	0.03	0.43	1.05	0.14
Uniform Delay, d1	21.6	23.7	15.7		23.9	21.2	36.1	17.0	10.6	42.7	27.1	17.4
Progression Factor	1.00	1.00	1.00		1.00	1.00	0.87	1.66	2.69	1.00	1.00	1.00
Incremental Delay, d2	0.5	1.9	0.4		2.3	0.1	8.1	3.2	0.0	2.1	47.4	0.1
Delay (s)	22.1	25.7	16.1		26.2	21.3	39.6	31.2	28.6	44.9	74.6	17.5
Level of Service	C	C	B		C	C	D	C	C	D	E	B
Approach Delay (s)		19.6			25.3			32.8			61.1	
Approach LOS		B			C			C			E	

Intersection Summary

HCM Average Control Delay	39.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↖	↕	↗	↖	↕
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	2530	1167	2608	1167	1304	2608
Flt Permitted	0.95	1.00	1.00	1.00	0.37	1.00
Satd. Flow (perm)	2530	1167	2608	1167	512	2608
Volume (vph)	139	154	581	289	250	808
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	149	166	625	311	269	869
RTOR Reduction (vph)	0	145	0	101	0	0
Lane Group Flow (vph)	149	21	625	210	269	869
Turn Type		Perm		Perm	pm+pt	
Protected Phases	6		8		7	4
Permitted Phases		6		8		4
Actuated Green, G (s)	10.7	10.7	60.3	60.3	70.3	70.3
Effective Green, g (s)	11.2	11.2	60.8	60.8	70.8	70.8
Actuated g/C Ratio	0.12	0.12	0.68	0.68	0.79	0.79
Clearance Time (s)	4.5	4.5	4.5	4.5	3.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	1.0	3.0
Lane Grp Cap (vph)	315	145	1762	788	456	2052
v/s Ratio Prot	c0.06		0.24		c0.04	0.33
v/s Ratio Perm		0.02		0.18	c0.43	
v/c Ratio	0.47	0.14	0.35	0.27	0.59	0.42
Uniform Delay, d1	36.7	35.1	6.2	5.8	3.0	3.1
Progression Factor	1.10	1.59	1.00	1.00	1.41	0.30
Incremental Delay, d2	1.1	0.5	0.6	0.8	0.7	0.3
Delay (s)	41.3	56.4	6.8	6.6	4.9	1.2
Level of Service	D	E	A	A	A	A
Approach Delay (s)	49.3		6.7			2.1
Approach LOS	D		A			A

Intersection Summary

HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1304	1167	2608	1167	1304	2608
Flt Permitted	0.95	1.00	1.00	1.00	0.30	1.00
Satd. Flow (perm)	1304	1167	2608	1167	408	2608
Volume (vph)	10	41	757	154	79	737
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	44	805	164	84	784
RTOR Reduction (vph)	0	35	0	55	0	0
Lane Group Flow (vph)	11	9	805	109	84	784
Turn Type	pm+ov		Perm pm+pt			
Protected Phases	6	7	8		7	4
Permitted Phases		6		8	4	
Actuated Green, G (s)	12.8	17.1	59.4	59.4	68.2	68.2
Effective Green, g (s)	13.3	18.1	59.9	59.9	68.7	68.7
Actuated g/C Ratio	0.15	0.20	0.67	0.67	0.76	0.76
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	193	287	1736	777	359	1991
v/s Ratio Prot	c0.01	0.00	c0.31		0.01	c0.30
v/s Ratio Perm		0.01		0.09	0.17	
v/c Ratio	0.06	0.03	0.46	0.14	0.23	0.39
Uniform Delay, d1	33.0	28.9	7.3	5.6	3.3	3.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.0	0.9	0.4	0.1	0.6
Delay (s)	33.0	28.9	8.2	5.9	3.4	4.2
Level of Service	C	C	A	A	A	A
Approach Delay (s)	29.7		7.8			4.1
Approach LOS	C		A			A

Intersection Summary

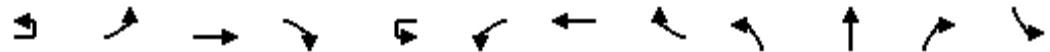
HCM Average Control Delay	6.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1560	1663		1583	1636			1646			1618	
Flt Permitted	0.26	1.00		0.14	1.00			0.96			0.92	
Satd. Flow (perm)	432	1663		230	1636			1586			1487	
Volume (vph)	265	904	10	22	525	46	46	681	38	28	318	62
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	279	952	11	23	553	48	48	717	40	29	335	65
RTOR Reduction (vph)	0	1	0	0	5	0	0	3	0	0	10	0
Lane Group Flow (vph)	279	962	0	23	596	0	0	802	0	0	419	0
Conf. Peds. (#/hr)	28		25	25		28	21		28	28		21
Conf. Bikes (#/hr)			13			10			6			3
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)	29.0	29.0		29.0	29.0			23.0			23.0	
Effective Green, g (s)	29.0	29.0		29.0	29.0			23.0			23.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.38			0.38	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	209	804		111	791			608			570	
v/s Ratio Prot		0.58			0.36							
v/s Ratio Perm	c0.65			0.10				c0.51			0.28	
v/c Ratio	1.33	1.20		0.21	0.75			1.32			0.73	
Uniform Delay, d1	15.5	15.5		8.9	12.6			18.5			15.9	
Progression Factor	1.00	1.00		0.66	0.75			2.20			1.00	
Incremental Delay, d2	179.5	100.7		1.6	2.6			150.0			8.2	
Delay (s)	195.0	116.2		7.5	12.1			190.7			24.0	
Level of Service	F	F		A	B			F			C	
Approach Delay (s)		133.9			11.9			190.7			24.0	
Approach LOS		F			B			F			C	

Intersection Summary

HCM Average Control Delay	108.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	129.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔	↑↑↑	↗		↔	↑↑↑	↗	↖	↖		↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		1.00	0.91	1.00		1.00	0.91	1.00	1.00	1.00		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1583	4550	1417		1583	4550	1417	1583	1660		1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.51	1.00		0.10
Satd. Flow (perm)		1583	4550	1417		1583	4550	1417	845	1660		165
Volume (vph)	35	136	2342	16	3	112	2118	179	25	496	15	170
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	36	140	2414	16	3	115	2184	185	26	511	15	175
RTOR Reduction (vph)	0	0	0	6	0	0	0	80	0	1	0	0
Lane Group Flow (vph)	0	176	2414	10	0	118	2184	105	26	525	0	175
Turn Type	Prot	Prot		Perm	Prot	Prot		pm+ov	pm+pt			pm+pt
Protected Phases	1	1	6		5	5	2	7	3	8		7
Permitted Phases				6				2	8			4
Actuated Green, G (s)		16.8	39.9	39.9		12.7	35.8	47.6	41.0	36.6		52.4
Effective Green, g (s)		16.8	40.9	40.9		12.7	36.8	48.6	43.0	38.6		54.4
Actuated g/C Ratio		0.14	0.34	0.34		0.11	0.31	0.41	0.36	0.32		0.45
Clearance Time (s)		4.0	5.0	5.0		4.0	5.0	4.0	4.0	6.0		4.0
Vehicle Extension (s)		3.0	4.4	4.4		3.0	4.3	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		222	1551	483		168	1395	621	330	534		214
v/s Ratio Prot		c0.11	c0.53			0.07	0.48	0.02	0.00	c0.32		c0.08
v/s Ratio Perm				0.01				0.06	0.03			0.29
v/c Ratio		0.79	1.56	0.02		0.70	1.57	0.17	0.08	0.98		0.82
Uniform Delay, d1		49.9	39.5	26.3		51.8	41.6	22.8	25.2	40.4		27.7
Progression Factor		1.00	1.00	1.00		1.43	0.39	0.64	1.00	1.00		1.22
Incremental Delay, d2		17.4	253.6	0.1		1.2	254.8	0.0	0.1	34.5		18.2
Delay (s)		67.3	293.1	26.3		75.6	271.2	14.6	25.3	74.9		52.1
Level of Service		E	F	C		E	F	B	C	E		D
Approach Delay (s)			276.3				242.8			72.6		
Approach LOS			F				F			E		

Intersection Summary			
HCM Average Control Delay	225.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	111.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations	↑	
Ideal Flow (vphpl)	1700	1700
Total Lost time (s)	4.0	
Lane Util. Factor	1.00	
Frt	0.97	
Flt Protected	1.00	
Satd. Flow (prot)	1622	
Flt Permitted	1.00	
Satd. Flow (perm)	1622	
Volume (vph)	250	54
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	258	56
RTOR Reduction (vph)	6	0
Lane Group Flow (vph)	308	0
Turn Type		
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	44.0	
Effective Green, g (s)	46.0	
Actuated g/C Ratio	0.38	
Clearance Time (s)	6.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	622	
v/s Ratio Prot	0.19	
v/s Ratio Perm		
v/c Ratio	0.50	
Uniform Delay, d1	28.2	
Progression Factor	1.07	
Incremental Delay, d2	0.5	
Delay (s)	30.7	
Level of Service	C	
Approach Delay (s)	38.4	
Approach LOS	D	

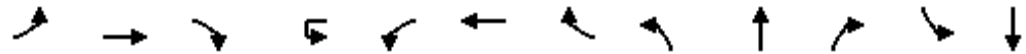
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1571	1641		1583	1631		1583	3034		1583	3055	
Flt Permitted	0.35	1.00		0.08	1.00		0.12	1.00		0.12	1.00	
Satd. Flow (perm)	573	1641		133	1631		208	3034		208	3055	
Volume (vph)	268	941	82	90	458	54	294	882	225	19	1083	219
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	279	980	85	94	477	56	306	919	234	20	1128	228
RTOR Reduction (vph)	0	4	0	0	5	0	0	25	0	0	19	0
Lane Group Flow (vph)	279	1061	0	94	528	0	306	1128	0	20	1337	0
Conf. Peds. (#/hr)	18		24	24		18	27		25	25		27
Conf. Bikes (#/hr)			5			42			5			2
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	49.0	49.0		49.0	49.0		31.1	31.1		31.1	31.1	
Effective Green, g (s)	50.0	50.0		50.0	50.0		32.0	32.0		32.0	32.0	
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.36	0.36		0.36	0.36	
Clearance Time (s)	5.0	5.0		5.0	5.0		4.9	4.9		4.9	4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	318	912		74	906		74	1079		74	1086	
v/s Ratio Prot		0.65			0.32			0.37			0.44	
v/s Ratio Perm	0.49			c0.70			c1.47			0.10		
v/c Ratio	0.88	1.16		1.27	0.58		4.14	1.05		0.27	1.23	
Uniform Delay, d1	17.3	20.0		20.0	13.1		29.0	29.0		20.7	29.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	27.1	85.8		193.5	2.7		1442.2	40.0		8.8	112.3	
Delay (s)	44.5	105.8		213.5	15.9		1471.2	69.0		29.5	141.3	
Level of Service	D	F		F	B		F	E		C	F	
Approach Delay (s)		93.1			45.5			363.1			139.7	
Approach LOS		F			D			F			F	

Intersection Summary

HCM Average Control Delay	182.2	HCM Level of Service	F
HCM Volume to Capacity ratio	2.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	142.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗		↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1583	4550	1417		1583	4550	1417	1583	3167	1417	1583	3167
Flt Permitted	0.95	1.00	1.00		0.95	1.00	1.00	0.14	1.00	1.00	0.23	1.00
Satd. Flow (perm)	1583	4550	1417		1583	4550	1417	238	3167	1417	387	3167
Volume (vph)	88	2229	271	10	89	1652	404	152	787	128	10	844
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	91	2298	279	10	92	1703	416	157	811	132	10	870
RTOR Reduction (vph)	0	0	20	0	0	0	102	0	0	80	0	0
Lane Group Flow (vph)	91	2298	259	0	102	1703	314	157	811	52	10	870
Turn Type	Prot		pm+ov	Prot	Prot		Perm	pm+pt		Perm	pm+pt	
Protected Phases	1	6	3	5	5	2		3	8		7	4
Permitted Phases			6				2	8		8		4
Actuated Green, G (s)	6.0	42.6	47.6		5.0	41.6	41.6	45.9	40.9	40.9	37.9	36.9
Effective Green, g (s)	6.0	43.9	49.9		5.0	42.9	42.9	49.1	43.1	43.1	41.1	39.1
Actuated g/C Ratio	0.05	0.40	0.45		0.05	0.39	0.39	0.45	0.39	0.39	0.37	0.36
Clearance Time (s)	4.0	5.3	5.0		4.0	5.3	5.3	5.0	6.2	6.2	5.0	6.2
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	4.2	4.2	3.0	3.6
Lane Grp Cap (vph)	86	1816	694		72	1775	553	180	1241	555	166	1126
v/s Ratio Prot	0.06	c0.51	0.02		c0.06	0.37		c0.05	0.26		0.00	0.27
v/s Ratio Perm			0.16				0.22	c0.34		0.04	0.02	
v/c Ratio	1.06	1.27	0.37		1.42	0.96	0.57	0.87	0.65	0.09	0.06	0.77
Uniform Delay, d1	52.0	33.0	19.8		52.5	32.7	26.3	24.5	27.3	21.1	22.5	31.5
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	113.8	124.0	0.3		251.0	13.7	4.2	34.0	1.4	0.1	0.2	3.5
Delay (s)	165.8	157.0	20.1		303.5	46.4	30.4	58.5	28.8	21.2	22.6	35.0
Level of Service	F	F	C		F	D	C	E	C	C	C	C
Approach Delay (s)		143.0				55.2			32.1			33.9
Approach LOS		F				E			C			C

Intersection Summary

HCM Average Control Delay	82.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	103.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Intersection Summary	
Lane Configurations	7
Ideal Flow (vphpl)	1700
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1417
Flt Permitted	1.00
Satd. Flow (perm)	1417
Volume (vph)	58
Peak-hour factor, PHF	0.97
Adj. Flow (vph)	60
RTOR Reduction (vph)	11
Lane Group Flow (vph)	49
Turn Type	pm+ov
Protected Phases	1
Permitted Phases	4
Actuated Green, G (s)	42.9
Effective Green, g (s)	45.1
Actuated g/C Ratio	0.41
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	581
v/s Ratio Prot	0.00
v/s Ratio Perm	0.03
v/c Ratio	0.08
Uniform Delay, d1	19.8
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	19.9
Level of Service	B
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑			↑↑↑	↔	↔	↔↔↔	↔			
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.91			0.86	1.00	0.86	0.81	0.86			
Frt	1.00	1.00			1.00	0.85	1.00	0.95	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.98	1.00			
Satd. Flow (prot)	3072	4550			5733	1417	1362	3770	1218			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.98	1.00			
Satd. Flow (perm)	3072	4550			5733	1417	1362	3770	1218			
Volume (vph)	547	1940	0	0	1636	279	875	291	745	0	0	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	558	1980	0	0	1669	285	893	297	760	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	144	0	10	10	0	0	0
Lane Group Flow (vph)	558	1980	0	0	1669	141	447	1113	370	0	0	0
Turn Type	Prot						Perm	Split	Perm			
Protected Phases	1	6					2	4	4			
Permitted Phases							2			4		
Actuated Green, G (s)	36.0	74.0					34.0	34.0	35.2	35.2	35.2	
Effective Green, g (s)	36.0	75.0					35.0	35.0	37.0	37.0	37.0	
Actuated g/C Ratio	0.30	0.62					0.29	0.29	0.31	0.31	0.31	
Clearance Time (s)	4.0	5.0					5.0	5.0	5.8	5.8	5.8	
Vehicle Extension (s)	3.0	3.0					3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	922	2844					1672	413	420	1162	376	
v/s Ratio Prot	0.18	c0.44					c0.29		c0.33	0.30		
v/s Ratio Perm								0.10			0.30	
v/c Ratio	0.61	0.70					1.00	0.34	1.06	0.98dl	0.98	
Uniform Delay, d1	35.9	14.9					42.5	33.4	41.5	40.7	41.2	
Progression Factor	0.82	0.91					1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	0.4					21.6	2.2	62.0	17.1	42.0	
Delay (s)	29.7	14.0					64.1	35.7	103.5	57.8	83.3	
Level of Service	C	B					E	D	F	E	F	
Approach Delay (s)	17.5						59.9		73.3		0.0	
Approach LOS	B						E		E		A	

Intersection Summary

HCM Average Control Delay	47.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.5%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑		↑↑	↑↑↑					↑	↑↑	↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.81		0.97	0.91					0.91	0.86	0.91
Frt		0.97		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6554		3072	4550					1441	2726	1289
Flt Permitted		1.00		0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6554		3072	4550					1441	2726	1289
Volume (vph)	0	1493	359	693	1813	0	0	0	0	1009	283	575
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1523	366	707	1850	0	0	0	0	1030	289	587
RTOR Reduction (vph)	0	36	0	0	0	0	0	0	0	0	11	14
Lane Group Flow (vph)	0	1853	0	707	1850	0	0	0	0	515	941	425
Turn Type				Prot						Split		Perm
Protected Phases		2		1	6					4	4	
Permitted Phases												4
Actuated Green, G (s)		40.3		30.5	75.3					35.0	35.0	35.0
Effective Green, g (s)		41.0		31.0	76.0					36.0	36.0	36.0
Actuated g/C Ratio		0.34		0.26	0.63					0.30	0.30	0.30
Clearance Time (s)		4.7		4.5	4.7					5.0	5.0	5.0
Vehicle Extension (s)		3.0		4.0	3.0					4.0	4.0	4.0
Lane Grp Cap (vph)		2239		794	2882					432	818	387
v/s Ratio Prot		c0.28		c0.23	0.41					c0.36	0.35	
v/s Ratio Perm												0.33
v/c Ratio		0.83		0.89	0.64					1.19	1.15	1.10
Uniform Delay, d1		36.3		42.9	13.6					42.0	42.0	42.0
Progression Factor		1.00		0.90	0.49					1.00	1.00	1.00
Incremental Delay, d2		3.7		1.4	0.1					107.3	81.5	74.9
Delay (s)		39.9		39.7	6.8					149.3	123.5	116.9
Level of Service		D		D	A					F	F	F
Approach Delay (s)		39.9			15.9			0.0			129.0	
Approach LOS		D			B			A			F	
Intersection Summary												
HCM Average Control Delay			57.0			HCM Level of Service				E		
HCM Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			116.5%			ICU Level of Service				H		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	0.99		1.00	1.00			0.98			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.99			0.93			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1569	1622		1583	1645			1526			1620	
Flt Permitted	0.25	1.00		0.12	1.00			0.98			0.88	
Satd. Flow (perm)	413	1622		208	1645			1502			1440	
Volume (vph)	46	976	137	277	631	37	35	292	311	17	73	10
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	46	976	137	277	631	37	35	292	311	17	73	10
RTOR Reduction (vph)	0	8	0	0	4	0	0	57	0	0	7	0
Lane Group Flow (vph)	46	1105	0	277	664	0	0	581	0	0	93	0
Conf. Peds. (#/hr)	19		23	23		19	17		16	16		17
Conf. Bikes (#/hr)			9			39			2			10
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	6		2		2		8		8		4	
Permitted Phases	6		2		2		8		8		4	
Actuated Green, G (s)	32.0	32.0		32.0	32.0			20.0			20.0	
Effective Green, g (s)	32.0	32.0		32.0	32.0			20.0			20.0	
Actuated g/C Ratio	0.53	0.53		0.53	0.53			0.33			0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	220	865		111	877			501			480	
v/s Ratio Prot		0.68			0.40							
v/s Ratio Perm	0.11			c1.33				c0.39			0.06	
v/c Ratio	0.21	1.28		2.50	0.76			1.16			0.19	
Uniform Delay, d1	7.4	14.0		14.0	11.0			20.0			14.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	2.2	133.6		699.0	6.1			92.4			0.2	
Delay (s)	9.5	147.6		713.0	17.0			112.4			14.5	
Level of Service	A	F		F	B			F			B	
Approach Delay (s)		142.1			221.0			112.4			14.5	
Approach LOS		F			F			F			B	

Intersection Summary

HCM Average Control Delay	157.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.98		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	139.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4536		1583	4508		1583	1612		1583	1599	
Flt Permitted	0.06	1.00		0.12	1.00		0.31	1.00		0.52	1.00	
Satd. Flow (perm)	104	4536		195	4508		524	1612		871	1599	
Volume (vph)	73	1472	30	27	1801	120	94	122	34	171	190	71
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	79	1600	33	29	1958	130	102	133	37	186	207	77
RTOR Reduction (vph)	0	1	0	0	4	0	0	10	0	0	7	0
Lane Group Flow (vph)	79	1632	0	29	2084	0	102	160	0	186	277	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			2			4			4		
Permitted Phases	2			2			4			4		
Actuated Green, G (s)	83.2	83.2		83.2	83.2		27.4	27.4		27.4	27.4	
Effective Green, g (s)	83.6	83.6		83.6	83.6		28.4	28.4		28.4	28.4	
Actuated g/C Ratio	0.70	0.70		0.70	0.70		0.24	0.24		0.24	0.24	
Clearance Time (s)	4.4	4.4		4.4	4.4		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	72	3160		136	3141		124	382		206	378	
v/s Ratio Prot		0.36			0.46			0.10			0.17	
v/s Ratio Perm	c0.76			0.15			0.19			c0.21		
v/c Ratio	1.10	0.52		0.21	0.66		0.82	0.42		0.90	0.73	
Uniform Delay, d1	18.2	8.6		6.5	10.3		43.4	38.8		44.5	42.3	
Progression Factor	1.31	0.80		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	78.9	0.1		3.6	1.1		33.7	0.7		37.0	7.2	
Delay (s)	102.6	7.0		10.0	11.4		77.1	39.6		81.4	49.5	
Level of Service	F	A		B	B		E	D		F	D	
Approach Delay (s)		11.5			11.4			53.6			62.1	
Approach LOS		B			B			D			E	

Intersection Summary

HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑	↗	↖↗	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1583	4550	3167	1417	3072	1417
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1583	4550	3167	1417	3072	1417
Volume (vph)	278	1517	1205	706	706	269
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	299	1631	1296	759	759	289
RTOR Reduction (vph)	0	0	0	14	0	8
Lane Group Flow (vph)	299	1631	1296	745	759	281
Turn Type	Prot			pm+ov		pt+ov
Protected Phases	5	2	6	4	4	4 5
Permitted Phases				6		
Actuated Green, G (s)	12.5	40.9	37.4	66.5	29.1	45.2
Effective Green, g (s)	12.0	40.8	37.3	66.0	28.7	44.7
Actuated g/C Ratio	0.13	0.45	0.41	0.73	0.32	0.50
Clearance Time (s)	3.5	3.9	3.9	3.6	3.6	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	211	2063	1313	1102	980	704
v/s Ratio Prot	c0.19	c0.36	c0.41	0.22	c0.25	0.20
v/s Ratio Perm				0.31		
v/c Ratio	1.42	0.79	0.99	0.68	0.77	0.40
Uniform Delay, d1	39.0	21.0	26.1	6.3	27.7	14.2
Progression Factor	1.00	1.00	0.59	0.41	1.00	1.00
Incremental Delay, d2	213.2	3.2	5.0	0.2	3.9	0.4
Delay (s)	252.2	24.1	20.5	2.8	31.6	14.6
Level of Service	F	C	C	A	C	B
Approach Delay (s)		59.5	13.9		26.9	
Approach LOS		E	B		C	

Intersection Summary

HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↑↑	↗		↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95	1.00		0.95	1.00
Frt	1.00	0.98		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.99	1.00
Satd. Flow (prot)	1583	4445		1583	4493			3138	1417		3149	1417
Flt Permitted	0.13	1.00		0.95	1.00			0.55	1.00		0.52	1.00
Satd. Flow (perm)	225	4445		1583	4493			1748	1417		1652	1417
Volume (vph)	455	1411	257	104	1366	125	210	937	130	93	719	122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	479	1485	271	109	1438	132	221	986	137	98	757	128
RTOR Reduction (vph)	0	29	0	0	12	0	0	0	85	0	0	17
Lane Group Flow (vph)	479	1727	0	109	1558	0	0	1207	52	0	855	111
Turn Type	Perm			Prot			Perm		Perm	Perm		Perm
Protected Phases		6		5	2			8			4	
Permitted Phases	6						8		8	4		4
Actuated Green, G (s)	36.0	36.0		8.0	48.0			33.5	33.5		33.5	33.5
Effective Green, g (s)	36.0	36.0		8.0	48.0			34.0	34.0		34.0	34.0
Actuated g/C Ratio	0.40	0.40		0.09	0.53			0.38	0.38		0.38	0.38
Clearance Time (s)	4.0	4.0		4.0	4.0			4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	90	1778		141	2396			660	535		624	535
v/s Ratio Prot		0.39		c0.07	0.35							
v/s Ratio Perm	c2.13							c0.69	0.04		0.52	0.08
v/c Ratio	5.32	0.97		0.77	0.65			1.87dl	0.10		1.37	0.21
Uniform Delay, d1	27.0	26.5		40.1	15.0			28.0	18.1		28.0	18.9
Progression Factor	1.42	1.44		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	1958.2	10.3		22.7	1.4			378.9	0.4		176.7	0.9
Delay (s)	1996.5	48.5		62.8	16.4			406.9	18.4		204.7	19.8
Level of Service	F	D		E	B			F	B		F	B
Approach Delay (s)		466.0			19.4			367.3			180.6	
Approach LOS		F			B			F			F	

Intersection Summary

HCM Average Control Delay	279.6	HCM Level of Service	F
HCM Volume to Capacity ratio	3.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	135.1%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
2: 6th St & Western Ave

2/23/2010

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕			↕↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0			4.0			4.0	4.0
Lane Util. Factor		0.95			0.95			0.95			0.95	1.00
Frbp, ped/bikes		0.99			0.96			0.99			1.00	0.75
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		0.99			0.98			0.99			1.00	0.85
Flt Protected		1.00			1.00			1.00			1.00	1.00
Satd. Flow (prot)		3115			2972			3111			3167	1066
Flt Permitted		1.00			1.00			1.00			1.00	1.00
Satd. Flow (perm)		3115			2972			3111			3167	1066
Volume (vph)	0	1217	78	0	1178	185	0	1631	97	0	1741	111
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	1268	81	0	1227	193	0	1699	101	0	1814	116
RTOR Reduction (vph)	0	1	0	0	2	0	0	5	0	0	0	7
Lane Group Flow (vph)	0	1348	0	0	1418	0	0	1795	0	0	1814	109
Conf. Peds. (#/hr)	136		73	73		136	120		104	120		104
Conf. Bikes (#/hr)			5			7			19			15
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)		40.2			40.2			40.2			40.2	40.2
Effective Green, g (s)		41.0			41.0			41.0			41.0	41.0
Actuated g/C Ratio		0.46			0.46			0.46			0.46	0.46
Clearance Time (s)		4.8			4.8			4.8			4.8	4.8
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1419			1354			1417			1443	486
v/s Ratio Prot		0.43			0.48			0.58			0.57	
v/s Ratio Perm												0.10
v/c Ratio		0.95			1.05			1.27			1.26	0.23
Uniform Delay, d1		23.5			24.5			24.5			24.5	14.9
Progression Factor		1.00			1.00			0.63			1.00	1.00
Incremental Delay, d2		14.6			37.9			120.6			121.5	1.1
Delay (s)		38.1			62.4			136.1			146.0	15.9
Level of Service		D			E			F			F	B
Approach Delay (s)		38.1			62.4			136.1			138.2	
Approach LOS		D			E			F			F	
Intersection Summary												
HCM Average Control Delay			100.3									F
HCM Volume to Capacity ratio			1.16									
Actuated Cycle Length (s)			90.0								8.0	
Intersection Capacity Utilization			125.6%									H
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖↗		↖	↖↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.97		1.00	0.96		1.00	0.96		1.00	0.91	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4370		1583	4314		1583	2990		1583	2790	
Flt Permitted	0.14	1.00		0.14	1.00		0.13	1.00		0.13	1.00	
Satd. Flow (perm)	228	4370		230	4314		222	2990		222	2790	
Volume (vph)	361	1248	105	118	1568	157	166	1502	171	134	1098	343
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	392	1357	114	128	1704	171	180	1633	186	146	1193	373
RTOR Reduction (vph)	0	11	0	0	14	0	0	9	0	0	33	0
Lane Group Flow (vph)	392	1460	0	128	1861	0	180	1810	0	146	1533	0
Conf. Peds. (#/hr)	663		371	371		663	453		618	618		453
Conf. Bikes (#/hr)			12			12			20			20
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	35.9	27.9		35.3	27.6		35.8	28.8		35.8	28.8	
Effective Green, g (s)	37.3	29.3		36.7	29.0		37.0	30.0		37.0	30.0	
Actuated g/C Ratio	0.41	0.33		0.41	0.32		0.41	0.33		0.41	0.33	
Clearance Time (s)	4.0	5.4		4.0	5.4		4.0	5.2		4.0	5.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	215	1423		210	1390		197	997		197	930	
v/s Ratio Prot	c0.16	0.33		0.05	0.43		c0.07	c0.61		0.06	0.55	
v/s Ratio Perm	c0.59			0.20			0.30			0.25		
v/c Ratio	1.82	1.03		0.61	1.34		0.91	1.82		0.74	1.65	
Uniform Delay, d1	23.2	30.4		20.2	30.5		43.2	30.0		42.2	30.0	
Progression Factor	1.82	0.96		0.78	0.89		0.87	0.99		1.74	1.51	
Incremental Delay, d2	375.3	19.6		3.6	156.2		24.6	368.7		1.4	292.1	
Delay (s)	417.4	48.7		19.4	183.4		62.1	398.6		74.7	337.5	
Level of Service	F	D		B	F		E	F		E	F	
Approach Delay (s)		126.3			173.0			368.3			315.0	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	245.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	136.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3136		1583	3110		1583	3163		1583	3153	
Flt Permitted	0.26	1.00		0.32	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	433	3136		527	3110		163	3163		163	3153	
Volume (vph)	51	595	41	95	656	88	61	1443	12	100	1541	45
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	54	633	44	101	698	94	65	1535	13	106	1639	48
RTOR Reduction (vph)	0	4	0	0	6	0	0	1	0	0	2	0
Lane Group Flow (vph)	54	673	0	101	786	0	65	1547	0	106	1685	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	8			4			6			2		
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	40.4	40.4		40.4	40.4		40.3	40.3		40.3	40.3	
Effective Green, g (s)	41.0	41.0		41.0	41.0		41.0	41.0		41.0	41.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46		0.46	0.46		0.46	0.46	
Clearance Time (s)	4.6	4.6		4.6	4.6		4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	197	1429		240	1417		74	1441		74	1436	
v/s Ratio Prot		0.21			c0.25			0.49			0.53	
v/s Ratio Perm	0.12			0.19			0.40			c0.65		
v/c Ratio	0.27	0.47		0.42	0.55		0.88	1.07		1.43	1.17	
Uniform Delay, d1	15.2	17.0		16.5	17.8		22.2	24.5		24.5	24.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.45	0.45	
Incremental Delay, d2	3.4	1.1		5.3	1.6		74.4	46.3		201.6	78.7	
Delay (s)	18.7	18.1		21.8	19.4		96.7	70.8		212.6	89.7	
Level of Service	B	B		C	B		F	E		F	F	
Approach Delay (s)		18.1			19.7			71.8			97.0	
Approach LOS		B			B			E			F	

Intersection Summary

HCM Average Control Delay	63.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕	↖	↖	↕↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4540		1583	4477		1583	3167	1417	1583	3167	1417
Flt Permitted	0.12	1.00		0.12	1.00		0.12	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	196	4540		194	4477		194	3167	1417	194	3167	1417
Volume (vph)	62	2059	32	98	1538	184	152	1233	91	175	1344	142
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	63	2080	32	99	1554	186	154	1245	92	177	1358	143
RTOR Reduction (vph)	0	1	0	0	14	0	0	0	19	0	0	25
Lane Group Flow (vph)	63	2111	0	99	1726	0	154	1245	73	177	1358	118
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases	6			2			8		8	4		4
Actuated Green, G (s)	40.2	33.0		41.0	33.4		41.4	33.4	41.0	41.4	33.4	40.6
Effective Green, g (s)	41.2	34.0		42.0	34.4		42.4	34.4	42.0	42.4	34.4	41.6
Actuated g/C Ratio	0.41	0.34		0.42	0.34		0.42	0.34	0.42	0.42	0.34	0.42
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	181	1544		187	1540		193	1089	652	193	1089	646
v/s Ratio Prot	0.03	c0.46		c0.04	0.39		0.06	0.39	0.01	c0.07	c0.43	0.01
v/s Ratio Perm	0.12			0.18			0.27		0.04	0.32		0.07
v/c Ratio	0.35	1.37		0.53	1.12		0.80	1.14	0.11	0.92	1.25	0.18
Uniform Delay, d1	23.1	33.0		23.9	32.8		46.9	32.8	17.7	24.4	32.8	18.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	169.4		2.7	63.5		20.1	75.7	0.1	41.7	119.0	0.1
Delay (s)	24.3	202.4		26.6	96.3		67.0	108.5	17.7	66.1	151.8	18.6
Level of Service	C	F		C	F		E	F	B	E	F	B
Approach Delay (s)		197.2			92.5			98.6			131.4	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	134.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	115.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4515		1583	4493		1583	3098		1583	3108	
Flt Permitted	0.09	1.00		0.09	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	145	4515		145	4493		185	3098		185	3108	
Volume (vph)	290	2060	112	112	1719	158	77	1081	181	96	1463	208
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	296	2102	114	114	1754	161	79	1103	185	98	1493	212
RTOR Reduction (vph)	0	3	0	0	12	0	0	2	0	0	6	0
Lane Group Flow (vph)	296	2213	0	114	1903	0	79	1286	0	98	1699	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	6			2			8			4		
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	45.5	45.5		45.5	45.5		35.5	35.5		35.5	35.5	
Effective Green, g (s)	46.0	46.0		46.0	46.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.40	0.40		0.40	0.40	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	2308		74	2296		74	1239		74	1243	
v/s Ratio Prot		0.49			0.42			0.41			c0.55	
v/s Ratio Perm	c2.04			0.79			0.43			0.53		
v/c Ratio	4.00	0.96		1.54	0.83		1.07	1.04		1.32	1.37	
Uniform Delay, d1	22.0	21.1		22.0	18.7		27.0	27.0		27.0	27.0	
Progression Factor	1.23	1.29		1.16	1.17		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1371.7	8.5		249.3	0.3		124.4	35.8		213.8	170.3	
Delay (s)	1398.8	35.6		274.7	22.2		151.4	62.8		240.8	197.3	
Level of Service	F	D		F	C		F	E		F	F	
Approach Delay (s)		196.2			36.4			68.0			199.7	
Approach LOS		F			D			E			F	

Intersection Summary

HCM Average Control Delay	132.2	HCM Level of Service	F
HCM Volume to Capacity ratio	2.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	133.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↑	↗		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)	1583	4539		1583	4538			1643	1417		1540	
Flt Permitted	0.08	1.00		0.06	1.00			0.90	1.00		0.91	
Satd. Flow (perm)	128	4539		98	4538			1494	1417		1411	
Volume (vph)	40	2279	36	78	1831	34	27	66	81	28	30	53
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	2477	39	85	1990	37	29	72	88	30	33	58
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	3	0	8	0
Lane Group Flow (vph)	43	2515	0	85	2026	0	0	101	85	0	113	0
Turn Type	Perm		Perm		Perm		Perm		Perm	Perm		
Protected Phases	6		2		2		8		8	4		
Permitted Phases	6		2		8		8		8	4		
Actuated Green, G (s)	68.0	68.0		68.0	68.0			13.5	13.5		13.5	
Effective Green, g (s)	68.0	68.0		68.0	68.0			14.0	14.0		14.0	
Actuated g/C Ratio	0.76	0.76		0.76	0.76			0.16	0.16		0.16	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.5	4.5		4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	97	3429		74	3429			232	220		219	
v/s Ratio Prot	0.55		0.45									
v/s Ratio Perm	0.34		c0.87				0.07		0.06	c0.08		
v/c Ratio	0.44		0.73		1.15		0.59		0.44	0.39		0.51
Uniform Delay, d1	4.0		6.0		11.0		4.9		34.4	34.2		34.9
Progression Factor	1.00		1.00		1.25		0.88		1.00	1.00		1.00
Incremental Delay, d2	14.0		1.4		117.4		0.4		1.3	1.1		2.0
Delay (s)	18.0		7.5		131.1		4.6		35.7	35.3		36.9
Level of Service	B		A		F		A		D	D		D
Approach Delay (s)	7.6		9.7		35.5		36.9					
Approach LOS	A		A		D		D					

Intersection Summary			
HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵↵↵	↵
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.91
Frbp, ped/bikes	0.96		1.00	1.00	0.98	0.96
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	0.95	0.85
Flt Protected	1.00		0.95	1.00	0.97	1.00
Satd. Flow (prot)	4241		1583	4550	2931	1238
Flt Permitted	1.00		0.09	1.00	0.97	1.00
Satd. Flow (perm)	4241		149	4550	2931	1238
Volume (vph)	1820	456	573	1432	597	669
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1857	465	585	1461	609	683
RTOR Reduction (vph)	48	0	0	0	57	1
Lane Group Flow (vph)	2274	0	585	1461	813	421
Conf. Peds. (#/hr)		185	185			22
Conf. Bikes (#/hr)		4				5
Turn Type			pm+pt		pm+ov	
Protected Phases	6		5	2	4	5
Permitted Phases			2			4
Actuated Green, G (s)	39.8		51.8	51.8	28.5	36.5
Effective Green, g (s)	40.8		52.8	52.8	29.2	37.2
Actuated g/C Ratio	0.45		0.59	0.59	0.32	0.41
Clearance Time (s)	5.0		4.0	5.0	4.7	4.0
Vehicle Extension (s)	3.0		2.0	3.0	2.0	2.0
Lane Grp Cap (vph)	1923		215	2669	951	567
v/s Ratio Prot	0.54		c0.24	0.32	c0.28	0.07
v/s Ratio Perm			c1.36			0.27
v/c Ratio	1.18		2.72	0.55	0.86	0.74
Uniform Delay, d1	24.6		26.7	11.3	28.4	22.4
Progression Factor	1.00		1.00	1.00	0.67	0.32
Incremental Delay, d2	87.9		787.4	0.8	5.3	3.3
Delay (s)	112.5		814.1	12.1	24.3	10.3
Level of Service	F		F	B	C	B
Approach Delay (s)	112.5			241.4	19.8	
Approach LOS	F			F	B	

Intersection Summary

HCM Average Control Delay	137.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	125.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗	↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3054		1583	1667	1417	1583	3116		1583	3163	
Flt Permitted	0.49	1.00		0.36	1.00	1.00	0.24	1.00		0.12	1.00	
Satd. Flow (perm)	809	3054		603	1667	1417	393	3116		201	3163	
Volume (vph)	20	364	113	187	232	59	184	1228	146	20	962	7
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	20	371	115	191	237	60	188	1253	149	20	982	7
RTOR Reduction (vph)	0	0	0	0	0	42	0	10	0	0	0	0
Lane Group Flow (vph)	20	486	0	191	237	18	188	1392	0	20	989	0
Turn Type	Perm			Perm			Perm	Perm		Perm		
Protected Phases	8			4			6			2		
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	26.4	26.4		26.4	26.4	26.4	54.3	54.3		54.3	54.3	
Effective Green, g (s)	27.0	27.0		27.0	27.0	27.0	55.0	55.0		55.0	55.0	
Actuated g/C Ratio	0.30	0.30		0.30	0.30	0.30	0.61	0.61		0.61	0.61	
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	243	916		181	500	425	240	1904		123	1933	
v/s Ratio Prot		0.16			0.14			0.45			0.31	
v/s Ratio Perm	0.02			c0.32		0.01	c0.48			0.10		
v/c Ratio	0.08	0.53		1.06	0.47	0.04	0.78	0.73		0.16	0.51	
Uniform Delay, d1	22.6	26.2		31.5	25.7	22.3	13.1	12.3		7.6	9.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.61	1.71		0.33	0.45	
Incremental Delay, d2	0.7	2.2		82.3	3.2	0.2	2.4	0.2		0.3	0.1	
Delay (s)	23.3	28.4		113.8	28.9	22.5	23.4	21.3		2.8	4.5	
Level of Service	C	C		F	C	C	C	C		A	A	
Approach Delay (s)		28.2			61.3			21.6			4.5	
Approach LOS		C			E			C			A	

Intersection Summary

HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕		↖	↕↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4490		1583	4520		1583	3129		1583	3167	1417
Flt Permitted	0.14	1.00		0.95	1.00		0.13	1.00		0.13	1.00	1.00
Satd. Flow (perm)	239	4490		1583	4520		209	3129		214	3167	1417
Volume (vph)	69	2232	215	80	1637	74	79	1427	122	74	1166	162
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	73	2349	226	84	1723	78	83	1502	128	78	1227	171
RTOR Reduction (vph)	0	12	0	0	5	0	0	6	0	0	0	107
Lane Group Flow (vph)	73	2563	0	84	1796	0	83	1624	0	78	1227	64
Turn Type	pm+pt		Prot		pm+pt		pm+pt		pm+pt		Perm	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2					4				8		8
Actuated Green, G (s)	32.3	27.0		8.3	29.1		38.0	30.9		36.6	30.2	30.2
Effective Green, g (s)	33.6	27.9		7.8	30.0		39.0	31.9		37.6	31.2	31.2
Actuated g/C Ratio	0.37	0.31		0.09	0.33		0.43	0.35		0.42	0.35	0.35
Clearance Time (s)	4.4	4.9		3.5	4.9		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	174	1392		137	1507		199	1109		187	1098	491
v/s Ratio Prot	0.03	c0.57		c0.05	0.40		c0.03	c0.52		0.03	0.39	
v/s Ratio Perm	0.13					0.15				0.15		0.05
v/c Ratio	0.42	1.84		0.61	1.19		0.42	1.46		0.42	1.12	0.13
Uniform Delay, d1	22.9	31.1		39.6	30.0		20.3	29.1		21.5	29.4	20.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.94	0.80	0.70
Incremental Delay, d2	1.6	381.2		7.9	93.1		1.4	213.8		1.3	64.0	0.5
Delay (s)	24.5	412.3		47.5	123.1		21.7	242.8		21.4	87.5	14.6
Level of Service	C			D	F		C	F		C	F	B
Approach Delay (s)	401.6			119.7			232.1			75.6		
Approach LOS	F			F			F			E		

Intersection Summary

HCM Average Control Delay	232.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	124.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↑	↗		↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.99	1.00
Satd. Flow (prot)	1583	4517		1583	4535			1644	1417		1649	1417
Flt Permitted	0.09	1.00		0.09	1.00			0.99	1.00		0.99	1.00
Satd. Flow (perm)	147	4517		147	4535			1644	1417		1649	1417
Volume (vph)	75	2056	103	6	1887	44	80	209	42	63	238	34
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	82	2259	113	7	2074	48	88	230	46	69	262	37
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	36	0	0	32
Lane Group Flow (vph)	82	2372	0	7	2120	0	0	318	10	0	331	5
Turn Type	Perm		Perm		Split		Perm		Split		Perm	
Protected Phases	6		2		4		4		3		3	
Permitted Phases	6		2				4				3	
Actuated Green, G (s)	43.6	43.6		43.6	43.6			19.0	19.0		10.5	10.5
Effective Green, g (s)	45.5	45.5		45.5	45.5			20.5	20.5		12.0	12.0
Actuated g/C Ratio	0.51	0.51		0.51	0.51			0.23	0.23		0.13	0.13
Clearance Time (s)	5.9	5.9		5.9	5.9			5.5	5.5		5.5	5.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	74	2284		74	2293			374	323		220	189
v/s Ratio Prot		0.53			0.47			c0.19			c0.20	
v/s Ratio Perm	c0.56			0.05				0.01				0.00
v/c Ratio	1.11	1.04		0.09	0.92			0.85	0.03		1.50	0.03
Uniform Delay, d1	22.2	22.2		11.6	20.7			33.3	27.0		39.0	33.9
Progression Factor	0.69	0.70		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	128.4	28.3		2.5	7.8			16.7	0.0		249.3	0.1
Delay (s)	143.8	44.0		14.1	28.5			49.9	27.1		288.3	34.0
Level of Service	F	D		B	C			D	C		F	C
Approach Delay (s)		47.3			28.4			47.0			262.7	
Approach LOS		D			C			D			F	

Intersection Summary

HCM Average Control Delay	54.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	103.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			1.00			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	1.00
Satd. Flow (prot)	1583	4542		1583	4540			1656			1652	1417
Flt Permitted	0.13	1.00		0.07	1.00			1.00			0.99	1.00
Satd. Flow (perm)	216	4542		123	4540			1656			1652	1417
Volume (vph)	175	1820	21	22	1408	20	12	268	10	14	67	187
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	182	1896	22	23	1467	21	12	279	10	15	70	195
RTOR Reduction (vph)	0	1	0	0	1	0	0	2	0	0	0	167
Lane Group Flow (vph)	182	1917	0	23	1487	0	0	299	0	0	85	28
Turn Type	Perm		Perm		Split		Split		Split		Perm	
Protected Phases	6		2		3		3		4		4	
Permitted Phases	6		2								4	
Actuated Green, G (s)	52.8	52.8		52.8	52.8			9.6			11.7	11.7
Effective Green, g (s)	54.3	54.3		54.3	54.3			11.0			12.7	12.7
Actuated g/C Ratio	0.60	0.60		0.60	0.60			0.12			0.14	0.14
Clearance Time (s)	5.5	5.5		5.5	5.5			5.4			5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	130	2740		74	2739			202			233	200
v/s Ratio Prot		0.42			0.33			c0.18			c0.05	
v/s Ratio Perm	c0.84			0.19								0.02
v/c Ratio	1.40	0.70		0.31	0.54			1.48			0.36	0.14
Uniform Delay, d1	17.9	12.3		8.7	10.5			39.5			35.0	33.9
Progression Factor	1.00	1.00		1.47	1.55			1.00			1.00	1.00
Incremental Delay, d2	219.7	1.5		4.3	0.3			241.3			1.0	0.3
Delay (s)	237.6	13.8		17.2	16.7			280.8			36.0	34.2
Level of Service	F	B		B	B			F			D	C
Approach Delay (s)		33.2			16.7			280.8			34.7	
Approach LOS		C			B			F			C	

Intersection Summary

HCM Average Control Delay	45.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: Wilshire Blvd & Sycamore Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↑	↑↑↑			↑			↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00	
Frbp, ped/bikes		0.99		1.00	1.00			0.98			0.98	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.99		1.00	1.00			0.94			0.93	
Flt Protected		1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		4231		1484	4267			1438			1432	
Flt Permitted		1.00		0.06	1.00			0.95			0.98	
Satd. Flow (perm)		4231		99	4267			1374			1407	
Volume (vph)	0	1912	68	47	1574	22	29	90	87	10	61	72
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	2101	75	52	1730	24	32	99	96	11	67	79
RTOR Reduction (vph)	0	3	0	0	1	0	0	4	0	0	13	0
Lane Group Flow (vph)	0	2173	0	52	1753	0	0	223	0	0	144	0
Conf. Peds. (#/hr)	34		71	71		34	15		9	9		15
Conf. Bikes (#/hr)			8			12			4			2
Turn Type				Perm			Perm			Perm		
Protected Phases		6			2			8			4	
Permitted Phases				2			8			4		
Actuated Green, G (s)		63.7		63.7	63.7			18.8			18.8	
Effective Green, g (s)		63.2		63.2	63.2			18.8			18.8	
Actuated g/C Ratio		0.70		0.70	0.70			0.21			0.21	
Clearance Time (s)		3.5		3.5	3.5			4.0			4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		2971		70	2996			287			294	
v/s Ratio Prot		0.51			0.41							
v/s Ratio Perm				c0.53				c0.16			0.10	
v/c Ratio		0.73		0.74	0.59			0.78			0.49	
Uniform Delay, d1		8.2		8.3	6.8			33.6			31.4	
Progression Factor		0.97		1.00	1.00			1.00			1.00	
Incremental Delay, d2		0.1		51.4	0.8			12.4			1.3	
Delay (s)		8.1		59.8	7.6			46.0			32.7	
Level of Service		A		E	A			D			C	
Approach Delay (s)		8.1			9.1			46.0			32.7	
Approach LOS		A			A			D			C	
Intersection Summary												
HCM Average Control Delay			11.4				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.75									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			76.3%				ICU Level of Service				D	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕	↘	↙	↕		↙	↕		↙	↕	↘
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2980	1333	1490	2957		1490	4254		1490	4237	
Flt Permitted	0.13	1.00	1.00	0.12	1.00		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	202	2980	1333	194	2957		216	4254		216	4237	
Volume (vph)	91	1499	102	119	1334	74	123	2189	102	153	2122	163
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	94	1545	105	123	1375	76	127	2257	105	158	2188	168
RTOR Reduction (vph)	0	0	35	0	4	0	0	5	0	0	9	0
Lane Group Flow (vph)	94	1545	70	123	1447	0	127	2357	0	158	2347	0
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases	8		8	4			6			2		
Actuated Green, G (s)	35.6	30.0	37.0	38.4	31.4		35.0	28.0		35.0	28.0	
Effective Green, g (s)	36.6	31.0	38.0	39.4	32.4		36.0	29.0		36.0	29.0	
Actuated g/C Ratio	0.41	0.34	0.42	0.44	0.36		0.40	0.32		0.40	0.32	
Clearance Time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	4.8	3.0	3.0	4.6		3.0	4.3		3.0	5.5	
Lane Grp Cap (vph)	162	1026	622	186	1065		185	1371		185	1365	
v/s Ratio Prot	0.04	c0.52	0.01	c0.05	0.49		0.05	c0.55		c0.07	0.55	
v/s Ratio Perm	0.20		0.04	0.24			0.22			0.27		
v/c Ratio	0.58	1.51	0.11	0.66	1.36		0.69	1.72		0.85	1.72	
Uniform Delay, d1	22.2	29.5	15.8	41.7	28.8		41.8	30.5		42.8	30.5	
Progression Factor	0.75	0.71	0.64	1.00	1.00		1.65	1.44		1.71	1.44	
Incremental Delay, d2	0.5	228.1	0.0	8.5	167.4		1.0	323.8		3.7	323.9	
Delay (s)	17.2	249.1	10.0	50.2	196.2		69.8	367.6		76.8	367.9	
Level of Service	B	F	B	D	F		E	F		E	F	
Approach Delay (s)		222.2			184.8			352.4			349.6	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	292.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	133.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘	↑↑↑		↘	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2980	1333	1490	2923		1490	4214		1490	4279	
Flt Permitted	0.15	1.00	1.00	0.24	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	232	2980	1333	371	2923		165	4214		165	4279	
Volume (vph)	40	724	118	154	1042	153	139	2109	249	100	2107	12
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	40	731	119	156	1053	155	140	2130	252	101	2128	12
RTOR Reduction (vph)	0	0	22	0	1	0	0	16	0	0	1	0
Lane Group Flow (vph)	40	731	97	156	1207	0	140	2366	0	101	2139	0
Turn Type	Perm		Perm	pm+pt		Perm		Perm		Perm		
Protected Phases		8		7	4		6		6		2	
Permitted Phases	8		8	4		6		2				
Actuated Green, G (s)	35.0	35.0	35.0	43.0	43.0	37.0	37.0	37.0	37.0	37.0	37.0	
Effective Green, g (s)	36.0	36.0	36.0	44.0	44.0	38.0	38.0	38.0	38.0	38.0	38.0	
Actuated g/C Ratio	0.40	0.40	0.40	0.49	0.49	0.42	0.42	0.42	0.42	0.42	0.42	
Clearance Time (s)	5.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	93	1192	533	231	1429	70	1779		70	1807		
v/s Ratio Prot		0.25		0.03	c0.41		0.56			0.50		
v/s Ratio Perm	0.17		0.07	0.30		c0.85		0.61				
v/c Ratio	0.43	0.61	0.18	0.68	0.84	2.00	1.33	1.44	1.18			
Uniform Delay, d1	19.6	21.5	17.5	17.6	20.0	26.0	26.0	26.0	26.0	26.0	26.0	
Progression Factor	1.42	1.46	1.71	1.00	1.00	1.00	1.00	0.34	0.35			
Incremental Delay, d2	1.3	0.2	0.1	7.6	6.3	496.6	152.4	206.6	83.4			
Delay (s)	29.0	31.5	30.0	25.2	26.3	522.6	178.4	215.5	92.4			
Level of Service	C	C	C	C	C	F	F	F	F			
Approach Delay (s)		31.2			26.2		197.5		97.9			
Approach LOS		C			C		F		F			

Intersection Summary

HCM Average Control Delay	111.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	125.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕↕		↕	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.91		1.00	0.91	
Frt		0.99			0.98		1.00	1.00		1.00	1.00	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2955			2923		1490	4280		1490	4264	
Flt Permitted		1.00			1.00		0.19	1.00		0.19	1.00	
Satd. Flow (perm)		2955			2923		302	4280		302	4264	
Volume (vph)	0	1263	77	0	976	145	71	2377	10	98	2164	63
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1289	79	0	996	148	72	2426	10	100	2208	64
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	5	0
Lane Group Flow (vph)	0	1368	0	0	1144	0	72	2435	0	100	2267	0
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases	8		4		4		6		6		2	
Permitted Phases	8		4		4		6		6		2	
Actuated Green, G (s)	30.3		30.3		30.3		20.1		20.1		20.1	
Effective Green, g (s)	31.2		31.2		31.2		20.8		20.8		20.8	
Actuated g/C Ratio	0.52		0.52		0.52		0.35		0.35		0.35	
Clearance Time (s)	4.9		4.9		4.9		4.7		4.7		4.7	
Vehicle Extension (s)	3.0		3.0		3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)	1537		1520		1520		105		1484		105	
v/s Ratio Prot	c0.46		0.39		0.39		c0.57		c0.57		0.53	
v/s Ratio Perm							0.24		0.24		0.33	
v/c Ratio	0.89		0.75		0.75		0.69		1.64		0.95	
Uniform Delay, d1	12.9		11.4		11.4		16.8		19.6		19.1	
Progression Factor	1.00		1.00		1.00		1.00		1.00		1.00	
Incremental Delay, d2	6.9		2.2		2.2		30.7		291.6		75.7	
Delay (s)	19.7		13.5		13.5		47.5		311.2		94.8	
Level of Service	B		B		B		D		F		F	
Approach Delay (s)	19.7		13.5		13.5		303.6		303.6		256.3	
Approach LOS	B		B		B		F		F		F	

Intersection Summary

HCM Average Control Delay	191.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	117.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑↑		↗	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1489	4167		1490	4167		1490	4252		1490	4200	
Flt Permitted	0.14	1.00		0.14	1.00		0.13	1.00		0.95	1.00	
Satd. Flow (perm)	216	4167		216	4167		202	4252		1490	4200	
Volume (vph)	182	1725	151	235	1320	120	135	2066	57	153	1906	112
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	186	1760	154	240	1347	122	138	2108	58	156	1945	114
RTOR Reduction (vph)	0	12	0	0	12	0	0	3	0	0	7	0
Lane Group Flow (vph)	186	1902	0	240	1457	0	138	2163	0	156	2052	0
Conf. Peds. (#/hr)	145		153	153		145	164		89	89		164
Conf. Bikes (#/hr)			13			8			6			17
Turn Type	pm+pt		pm+pt		pm+pt		Prot					
Protected Phases	1	6	5	2	3	8	7	4				
Permitted Phases	6		2		8							
Actuated Green, G (s)	36.5	29.0	36.5	29.0	38.5	31.0	7.5	31.0				
Effective Green, g (s)	36.0	29.0	36.0	29.0	38.0	31.0	7.0	31.0				
Actuated g/C Ratio	0.40	0.32	0.40	0.32	0.42	0.34	0.08	0.34				
Clearance Time (s)	3.5	4.0	3.5	4.0	3.5	4.0	3.5	4.0				
Vehicle Extension (s)	3.0	4.0	3.0	4.0	3.0	4.0	2.0	4.0				
Lane Grp Cap (vph)	185	1343	185	1343	185	1465	116	1447				
v/s Ratio Prot	0.08	c0.46	c0.10	0.35	0.06	c0.51	c0.10	0.49				
v/s Ratio Perm	0.32		0.42		0.26							
v/c Ratio	1.01	1.42	1.30	1.09	0.75	1.48	1.34	1.42				
Uniform Delay, d1	23.3	30.5	43.7	30.5	42.2	29.5	41.5	29.5				
Progression Factor	1.58	0.79	1.49	0.79	2.08	1.19	1.00	1.00				
Incremental Delay, d2	48.2	189.7	162.3	49.2	1.5	214.7	201.7	192.2				
Delay (s)	85.0	213.9	227.4	73.3	89.2	249.9	243.2	221.7				
Level of Service	F	F	F	E	F	F	F	F				
Approach Delay (s)	202.5		95.0		240.2		223.2					
Approach LOS	F		F		F		F					

Intersection Summary

HCM Average Control Delay	196.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	132.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕↕		↕	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.98		1.00	1.00		1.00	1.00	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1503			1509		1490	4268		1490	4250	
Flt Permitted		0.96			0.76		0.09	1.00		0.09	1.00	
Satd. Flow (perm)		1451			1163		146	4268		146	4250	
Volume (vph)	40	406	137	62	167	46	17	2155	30	19	2234	51
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	41	414	140	63	170	47	17	2199	31	19	2280	52
RTOR Reduction (vph)	0	1	0	0	1	0	0	2	0	0	3	0
Lane Group Flow (vph)	0	594	0	0	279	0	17	2228	0	19	2329	0
Conf. Peds. (#/hr)	10		12	12		10	57		25	25		57
Conf. Bikes (#/hr)			2						1			15
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		37.9			37.9		42.6	42.6		42.6	42.6	
Effective Green, g (s)		38.9			38.9		43.1	43.1		43.1	43.1	
Actuated g/C Ratio		0.43			0.43		0.48	0.48		0.48	0.48	
Clearance Time (s)		5.0			5.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		627			503		70	2044		70	2035	
v/s Ratio Prot								0.52			c0.55	
v/s Ratio Perm		c0.41			0.24		0.12			0.13		
v/c Ratio		0.95			0.56		0.24	1.09		0.27	1.14	
Uniform Delay, d1		24.6			19.1		13.8	23.4		14.0	23.4	
Progression Factor		1.00			1.00		1.00	1.00		0.47	0.62	
Incremental Delay, d2		23.6			1.3		8.1	49.4		0.9	65.7	
Delay (s)		48.2			20.4		21.9	72.8		7.5	80.2	
Level of Service		D			C		C	E		A	F	
Approach Delay (s)		48.2			20.4			72.4			79.6	
Approach LOS		D			C			E			E	
Intersection Summary												
HCM Average Control Delay			70.2				HCM Level of Service			E		
HCM Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		8.0			
Intersection Capacity Utilization			100.5%				ICU Level of Service		G			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↘↙		↖	↗↘↙		↖	↗↘↙		↖	↗↘↙	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	4274		1490	4228		1490	4269		1490	4232	
Flt Permitted	0.13	1.00		0.11	1.00		0.95	1.00		0.11	1.00	
Satd. Flow (perm)	210	4274		176	4228		1490	4269		176	4232	
Volume (vph)	295	1932	26	82	1261	115	41	2145	47	195	2239	189
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	304	1992	27	85	1300	119	42	2211	48	201	2308	195
RTOR Reduction (vph)	0	1	0	0	11	0	0	2	0	0	9	0
Lane Group Flow (vph)	304	2018	0	85	1408	0	42	2257	0	201	2494	0
Turn Type	Perm		pm+pt			Prot		pm+pt				
Protected Phases	8		7			4		5		1		6
Permitted Phases	8		4					2		6		
Actuated Green, G (s)	30.2	30.2	41.7		41.7	5.8		30.3	47.5		37.7	
Effective Green, g (s)	31.6	31.6	43.1		43.1	5.8		31.7	48.9		39.1	
Actuated g/C Ratio	0.32	0.32	0.43		0.43	0.06		0.32	0.49		0.39	
Clearance Time (s)	5.4	5.4	4.0		5.4	4.0		5.4	4.0		5.4	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	4.0		3.0	
Lane Grp Cap (vph)	66	1351	174		1822	86		1353	260		1655	
v/s Ratio Prot	0.47		0.04		c0.33	0.03		c0.10		c0.59		
v/s Ratio Perm	c1.44		0.17		c0.53		0.28					
v/c Ratio	4.61	1.49	0.49		0.77	0.49		1.67	0.77		1.51	
Uniform Delay, d1	34.2	34.2	45.4		24.3	45.7		34.1	24.1		30.4	
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	1656.8	226.0	2.2		3.3	4.3		303.9	14.1		231.4	
Delay (s)	1691.0	260.2	47.5		27.5	50.0		338.1	38.2		261.9	
Level of Service	F		D		C	D		F	D		F	
Approach Delay (s)	447.5		28.7		332.8		245.3					
Approach LOS	F		C		F		F					

Intersection Summary

HCM Average Control Delay	284.4	HCM Level of Service	F
HCM Volume to Capacity ratio	2.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	128.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑			↑↑↑			↑	↗		↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91			0.91			1.00	1.00		1.00	
Frbp, ped/bikes	1.00	0.97			0.99			1.00	0.96		0.98	
Flpb, ped/bikes	0.99	1.00			1.00			0.99	1.00		1.00	
Frt	1.00	0.99			0.99			1.00	0.85		0.97	
Flt Protected	0.95	1.00			1.00			0.99	1.00		0.99	
Satd. Flow (prot)	1470	4103			4208			1532	1281		1469	
Flt Permitted	0.10	1.00			1.00			0.84	1.00		0.68	
Satd. Flow (perm)	152	4103			4208			1305	1281		1009	
Volume (vph)	237	1819	194	0	1454	65	78	246	146	46	111	46
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	263	2021	216	0	1616	72	87	273	162	51	123	51
RTOR Reduction (vph)	0	13	0	0	5	0	0	0	4	0	11	0
Lane Group Flow (vph)	263	2224	0	0	1683	0	0	360	159	0	215	0
Conf. Peds. (#/hr)	95		113	113		95	73		22	22		73
Conf. Bikes (#/hr)			13			15			3			3
Turn Type	Perm			Perm			Perm		Perm		Perm	
Protected Phases	6			2			8		8		4	
Permitted Phases	6						8		8		4	
Actuated Green, G (s)	55.5	55.5			55.5			27.0	27.0		27.0	
Effective Green, g (s)	55.0	55.0			55.0			27.0	27.0		27.0	
Actuated g/C Ratio	0.61	0.61			0.61			0.30	0.30		0.30	
Clearance Time (s)	3.5	3.5			3.5			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	93	2507			2572			392	384		303	
v/s Ratio Prot		0.54			0.40							
v/s Ratio Perm	c1.73						c0.28		0.12		0.21	
v/c Ratio	2.83	0.89			0.65			0.92	0.41		0.71	
Uniform Delay, d1	17.5	14.9			11.3			30.4	25.2		28.0	
Progression Factor	1.20	1.16			0.27			1.00	1.00		1.00	
Incremental Delay, d2	842.9	3.7			0.1			25.9	0.7		7.4	
Delay (s)	863.9	20.9			3.2			56.4	25.9		35.4	
Level of Service	F	C			A			E	C		D	
Approach Delay (s)		109.6			3.2			46.9			35.4	
Approach LOS		F			A			D			D	

Intersection Summary			
HCM Average Control Delay	63.2	HCM Level of Service	E
HCM Volume to Capacity ratio	2.20		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	105.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑	↖		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.86	0.86		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.96			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.99	
Satd. Flow (prot)	1583	4537		1583	4300	1218		1588			1583	
Flt Permitted	0.10	1.00		0.08	1.00	1.00		0.89			0.78	
Satd. Flow (perm)	173	4537		128	4300	1218		1415			1255	
Volume (vph)	101	1841	35	76	1384	133	36	163	86	95	209	127
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	111	2023	38	84	1521	146	40	179	95	104	230	140
RTOR Reduction (vph)	0	2	0	0	0	62	0	6	0	0	17	0
Lane Group Flow (vph)	111	2059	0	84	1521	84	0	308	0	0	457	0
Turn Type	Perm			Perm			Perm	Perm			Perm	
Protected Phases	6			2			8	8			4	
Permitted Phases	6			2			8	8			4	
Actuated Green, G (s)	52.0	52.0		52.0	52.0	52.0		30.0			30.0	
Effective Green, g (s)	52.0	52.0		52.0	52.0	52.0		30.0			30.0	
Actuated g/C Ratio	0.58	0.58		0.58	0.58	0.58		0.33			0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	100	2621		74	2484	704		472			418	
v/s Ratio Prot		0.45			0.35							
v/s Ratio Perm	0.64			c0.66		0.07		0.22			c0.36	
v/c Ratio	1.11	0.79		1.14	0.61	0.12		0.65			1.09	
Uniform Delay, d1	19.0	14.7		19.0	12.4	8.6		25.6			30.0	
Progression Factor	1.87	2.00		0.93	0.75	0.59		1.00			1.00	
Incremental Delay, d2	107.9	1.7		130.8	0.8	0.3		3.2			71.9	
Delay (s)	143.4	31.2		148.4	10.2	5.3		28.8			101.9	
Level of Service	F	C		F	B	A		C			F	
Approach Delay (s)		36.9			16.4			28.8			101.9	
Approach LOS		D			B			C			F	

Intersection Summary

HCM Average Control Delay	35.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	103.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	1.00		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	4546		1583	4550	1526	
Flt Permitted	1.00		0.07	1.00	0.97	
Satd. Flow (perm)	4546		121	4550	1526	
Volume (vph)	1942	10	51	1473	77	58
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2044	11	54	1551	81	61
RTOR Reduction (vph)	0	0	0	0	4	0
Lane Group Flow (vph)	2055	0	54	1551	138	0
Turn Type			Perm			
Protected Phases	6			2	8	
Permitted Phases			2			
Actuated Green, G (s)	54.8		54.8	54.8	26.0	
Effective Green, g (s)	55.3		55.3	55.3	26.7	
Actuated g/C Ratio	0.61		0.61	0.61	0.30	
Clearance Time (s)	4.5		4.5	4.5	4.7	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2793		74	2796	453	
v/s Ratio Prot	c0.45			0.34	c0.09	
v/s Ratio Perm			0.45			
v/c Ratio	0.74		0.73	0.55	0.31	
Uniform Delay, d1	12.2		12.1	10.1	24.5	
Progression Factor	1.00		1.55	1.60	1.00	
Incremental Delay, d2	1.8		37.7	0.6	0.4	
Delay (s)	14.0		56.6	16.8	24.9	
Level of Service	B		E	B	C	
Approach Delay (s)	14.0			18.1	24.9	
Approach LOS	B			B	C	
Intersection Summary						
HCM Average Control Delay			16.1		HCM Level of Service	B
HCM Volume to Capacity ratio			0.60			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			62.8%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	3167	1417	1583	3167	1417	1583	3167	1417	1583	3139	3139
Flt Permitted	0.17	1.00	1.00	0.10	1.00	1.00	0.15	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	287	3167	1417	167	3167	1417	247	3167	1417	215	3139	3139
Volume (vph)	106	1447	112	156	1122	217	122	1303	243	126	1282	81
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	110	1507	117	162	1169	226	127	1357	253	131	1335	84
RTOR Reduction (vph)	0	0	19	0	0	1	0	0	119	0	5	0
Lane Group Flow (vph)	110	1507	98	162	1169	225	127	1357	134	131	1414	0
Turn Type	Perm		Perm	pm+pt		pm+ov	Perm		Perm	pm+pt		
Protected Phases		6		5		2	7		8		7	4
Permitted Phases	6		6	2		2	8		8		4	
Actuated Green, G (s)	35.0	35.0	35.0	44.0	44.0	49.7	27.1	27.1	27.1	36.0	36.0	36.0
Effective Green, g (s)	36.0	36.0	36.0	45.0	45.0	51.0	27.0	27.0	27.0	37.0	37.0	37.0
Actuated g/C Ratio	0.40	0.40	0.40	0.50	0.50	0.57	0.30	0.30	0.30	0.41	0.41	0.41
Clearance Time (s)	5.0	5.0	5.0	3.2	5.0	4.3	3.9	3.9	3.9	4.3	5.0	5.0
Vehicle Extension (s)	4.7	4.7	4.7	3.0	4.2	3.0	4.3	4.3	4.3	3.0	4.5	4.5
Lane Grp Cap (vph)	115	1267	567	162	1584	866	74	950	425	180	1290	1290
v/s Ratio Prot		c0.48		c0.06	0.37	0.02		0.43		0.05	c0.45	
v/s Ratio Perm	0.38		0.07	0.44		0.14	c0.51		0.09	0.25		
v/c Ratio	0.96	1.19	0.17	1.00	0.74	0.26	1.72	1.43	0.32	0.73	1.10	1.10
Uniform Delay, d1	26.2	27.0	17.4	44.7	17.8	9.9	31.5	31.5	24.4	42.7	26.5	26.5
Progression Factor	1.00	1.00	1.00	2.36	0.25	0.30	0.49	0.49	0.14	1.14	1.16	1.16
Incremental Delay, d2	72.9	93.4	0.7	21.2	0.3	0.0	327.5	193.4	0.2	8.8	51.4	51.4
Delay (s)	99.1	120.4	18.1	126.6	4.7	2.9	343.0	208.7	3.6	57.7	82.2	82.2
Level of Service	F	F	B	F	A	A	F	F	A	E	F	F
Approach Delay (s)		112.1			17.2			188.6			80.2	
Approach LOS		F			B			F			F	

Intersection Summary

HCM Average Control Delay	102.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	118.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗	↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3143		1583	3167	1417	1583	3139		1583	3121	
Flt Permitted	0.20	1.00		0.12	1.00	1.00	0.14	1.00		0.12	1.00	
Satd. Flow (perm)	326	3143		196	3167	1417	238	3139		208	3121	
Volume (vph)	183	1318	70	114	819	198	90	1271	79	229	1330	142
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	187	1345	71	116	836	202	92	1297	81	234	1357	145
RTOR Reduction (vph)	0	4	0	0	0	31	0	5	0	0	9	0
Lane Group Flow (vph)	187	1412	0	116	836	171	92	1373	0	234	1493	0
Turn Type	pm+pt			pm+pt		pm+ov	Perm			pm+pt		
Protected Phases	1	6		5	2	7		8		7	4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	40.2	32.4		39.6	32.1	37.9	26.1	26.1		35.1	35.1	
Effective Green, g (s)	41.3	34.3		40.7	34.0	39.0	28.0	28.0		37.0	37.0	
Actuated g/C Ratio	0.46	0.38		0.45	0.38	0.43	0.31	0.31		0.41	0.41	
Clearance Time (s)	3.2	5.9		3.2	5.9	3.2	5.9	5.9		3.2	5.9	
Vehicle Extension (s)	3.0	4.6		3.0	4.7	3.0	4.7	4.7		3.0	4.7	
Lane Grp Cap (vph)	247	1198		192	1196	677	74	977		162	1283	
v/s Ratio Prot	c0.06	c0.45		0.04	0.26	0.01		0.44		0.08	c0.48	
v/s Ratio Perm	0.29			0.23		0.11	0.39			c0.51		
v/c Ratio	0.76	1.18		0.60	0.70	0.25	1.24	1.41		1.44	1.16	
Uniform Delay, d1	16.7	27.9		21.0	23.7	16.2	31.0	31.0		44.7	26.5	
Progression Factor	1.00	1.00		1.74	1.07	0.88	1.50	1.48		0.93	0.50	
Incremental Delay, d2	12.4	89.2		1.4	0.9	0.1	176.3	187.9		211.1	76.8	
Delay (s)	29.1	117.0		37.9	26.2	14.3	222.7	233.8		252.8	90.0	
Level of Service	C			D		C	B	F		F	F	
Approach Delay (s)	106.8			25.3				233.1		111.9		
Approach LOS	F			C				F		F		

Intersection Summary

HCM Average Control Delay	123.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	119.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖↗	↖	↗	↖	↖↗	↗	↖	↖↗	↖↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	0.98		1.00	1.00	0.75	1.00	1.00	0.65	1.00	0.99	
Flpb, ped/bikes	0.85	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1349	1615		3072	1667	1060	1583	3167	918	1502	3104	
Flt Permitted	0.55	1.00		0.95	1.00	1.00	0.10	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	781	1615		3072	1667	1060	174	3167	918	276	3104	
Volume (vph)	19	421	37	175	338	144	46	1039	304	36	1225	49
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	20	439	39	182	352	150	48	1082	317	38	1276	51
RTOR Reduction (vph)	0	4	0	0	0	17	0	0	0	0	3	0
Lane Group Flow (vph)	20	474	0	182	352	133	48	1082	317	38	1324	0
Conf. Peds. (#/hr)	152		159	159		152	117		165	165		117
Conf. Bikes (#/hr)			5			9			7			6
Turn Type	Perm			Prot		Perm	Perm		pm+ov	Perm		
Protected Phases		8		7	4			6	7		2	
Permitted Phases	8					4	6		6		2	
Actuated Green, G (s)	20.2	20.2		10.0	34.2	34.2	46.2	46.2	56.2	46.2	46.2	
Effective Green, g (s)	21.0	21.0		10.0	35.0	35.0	47.0	47.0	57.0	47.0	47.0	
Actuated g/C Ratio	0.23	0.23		0.11	0.39	0.39	0.52	0.52	0.63	0.52	0.52	
Clearance Time (s)	4.8	4.8		4.0	4.8	4.8	4.8	4.8	4.0	4.8	4.8	
Vehicle Extension (s)	5.9	5.9		3.0	5.2	5.2	4.8	4.8	3.0	4.4	4.4	
Lane Grp Cap (vph)	182	377		341	648	412	91	1654	622	144	1621	
v/s Ratio Prot		c0.29		0.06	0.21			0.34	c0.06		c0.43	
v/s Ratio Perm	0.03					0.13	0.28		0.29	0.14		
v/c Ratio	0.11	1.26		0.53	0.54	0.32	0.53	0.65	0.51	0.26	0.82	
Uniform Delay, d1	27.1	34.5		37.8	21.3	19.2	14.2	15.6	8.9	11.9	17.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.29	0.24	0.35	0.51	0.78	
Incremental Delay, d2	1.2	135.9		1.6	3.3	2.1	2.0	0.2	0.1	0.4	0.4	
Delay (s)	28.4	170.4		39.4	24.6	21.3	6.0	4.0	3.2	6.5	14.5	
Level of Service	C	F		D	C	C	A	A	A	A	B	
Approach Delay (s)		164.7			27.8			3.9			14.3	
Approach LOS		F			C			A			B	

Intersection Summary

HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗		↗	↗↗		↗	↗↗	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.97		1.00	0.98		1.00	0.95		1.00	1.00	0.81
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4321		1583	4418		1583	2937		1583	3167	1149
Flt Permitted	0.15	1.00		0.15	1.00		0.13	1.00		0.95	1.00	1.00
Satd. Flow (perm)	243	4321		243	4418		218	2937		1583	3167	1149
Volume (vph)	295	1940	328	187	1177	97	65	1323	204	169	1523	222
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	311	2042	345	197	1239	102	68	1393	215	178	1603	234
RTOR Reduction (vph)	0	26	0	0	10	0	0	13	0	0	0	117
Lane Group Flow (vph)	311	2361	0	197	1331	0	68	1595	0	178	1603	117
Confl. Peds. (#/hr)	152		159	159		152	167		215	215		167
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8					4
Actuated Green, G (s)	33.2	26.4		33.2	26.4		34.9	29.6		10.8	35.1	35.1
Effective Green, g (s)	33.4	27.4		33.4	27.4		35.1	30.6		10.0	36.1	36.1
Actuated g/C Ratio	0.37	0.30		0.37	0.30		0.39	0.34		0.11	0.40	0.40
Clearance Time (s)	3.2	5.0		3.2	5.0		3.2	5.0		3.2	5.0	5.0
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	180	1316		180	1345		153	999		176	1270	461
v/s Ratio Prot	c0.12	c0.55		0.07	0.30		0.02	c0.54		c0.11	0.51	
v/s Ratio Perm	0.53			0.33			0.15					0.10
v/c Ratio	1.73	1.79		1.09	0.99		0.44	1.60		1.01	1.26	0.25
Uniform Delay, d1	25.5	31.3		44.2	31.2		42.4	29.7		40.0	26.9	18.0
Progression Factor	1.34	1.21		1.00	1.00		0.95	0.81		0.83	1.49	2.91
Incremental Delay, d2	341.9	359.1		94.6	22.1		1.7	272.4		64.1	123.3	1.1
Delay (s)	376.1	397.0		138.8	53.3		42.0	296.5		97.2	163.6	53.4
Level of Service	F	F		F	D		D	F		F	F	D
Approach Delay (s)		394.6			64.2			286.2			144.9	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	244.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	135.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗	↖	↔	↗		↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)			4.0	4.0	4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor			1.00	0.95	0.91	0.95		0.95		1.00	0.95	
Frbp, ped/bikes			0.98	1.00	0.98	0.97		0.99		1.00	1.00	
Flpb, ped/bikes			1.00	1.00	1.00	1.00		1.00		0.99	1.00	
Frt			0.86	1.00	0.92	0.85		0.99		1.00	1.00	
Flt Protected			1.00	0.95	0.98	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1413	1501	1338	1299		3102		1575	3167	
Flt Permitted			1.00	0.95	0.98	1.00		1.00		0.13	1.00	
Satd. Flow (perm)			1413	1501	1338	1299		3102		216	3167	
Volume (vph)	0	0	82	111	0	125	0	1273	121	186	1177	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	84	113	0	128	0	1299	123	190	1201	0
RTOR Reduction (vph)	0	0	79	0	39	70	0	6	0	0	0	0
Lane Group Flow (vph)	0	0	5	72	48	12	0	1416	0	190	1201	0
Conf. Peds. (#/hr)	10		1	1		10	18		29	29		18
Conf. Bikes (#/hr)			1			2			3			3
Turn Type			custom	Perm		Perm				Perm		
Protected Phases					3			2			2	
Permitted Phases			4	3		3				2		
Actuated Green, G (s)			4.8	12.3	12.3	12.3		58.5		58.5	58.5	
Effective Green, g (s)			5.7	13.2	13.2	13.2		59.1		59.1	59.1	
Actuated g/C Ratio			0.06	0.15	0.15	0.15		0.66		0.66	0.66	
Clearance Time (s)			4.9	4.9	4.9	4.9		4.6		4.6	4.6	
Vehicle Extension (s)			3.0	3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)			89	220	196	191		2037		142	2080	
v/s Ratio Prot								0.46			0.38	
v/s Ratio Perm			c0.00	c0.05	0.04	0.01				c0.88		
v/c Ratio			0.06	0.33	0.24	0.06		0.70		1.34	0.58	
Uniform Delay, d1			39.6	34.4	34.0	33.1		9.8		15.4	8.5	
Progression Factor			1.00	1.00	1.00	1.00		1.00		1.14	0.71	
Incremental Delay, d2			0.3	0.9	0.6	0.1		2.0		156.5	0.1	
Delay (s)			39.9	35.3	34.6	33.2		11.7		174.1	6.1	
Level of Service			D	D	C	C		B		F	A	
Approach Delay (s)		39.9			34.3			11.7			29.1	
Approach LOS		D			C			B			C	
Intersection Summary												
HCM Average Control Delay			21.9									HCM Level of Service C
HCM Volume to Capacity ratio			1.07									
Actuated Cycle Length (s)			90.0									Sum of lost time (s) 12.0
Intersection Capacity Utilization			77.6%									ICU Level of Service D
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑		↔	↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	
Lane Util. Factor		0.91			0.91		1.00	0.86			0.86	
Frt		0.99			0.96		1.00	1.00			1.00	
Flt Protected		1.00			1.00		0.95	1.00			1.00	
Satd. Flow (prot)		4493			4370		1583	5733			5733	
Flt Permitted		1.00			1.00		0.17	1.00			1.00	
Satd. Flow (perm)		4493			4370		284	5733			5733	
Volume (vph)	0	1952	178	0	1233	443	63	1313	0	0	1568	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1992	182	0	1258	452	64	1340	0	0	1600	0
RTOR Reduction (vph)	0	11	0	0	65	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2163	0	0	1645	0	64	1340	0	0	1600	0
Turn Type							Perm					
Protected Phases		6			6			2			2	
Permitted Phases							2					
Actuated Green, G (s)		22.1			22.1		24.5	24.5			24.5	
Effective Green, g (s)		23.0			23.0		23.5	23.5			23.5	
Actuated g/C Ratio		0.23			0.23		0.24	0.24			0.24	
Clearance Time (s)		4.9			4.9		3.0	3.0			3.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		1033			1005		67	1347			1347	
v/s Ratio Prot		c0.48			0.38			0.23			c0.28	
v/s Ratio Perm							0.23					
v/c Ratio		2.09			1.64		0.96	0.99			1.19	
Uniform Delay, d1		38.5			38.5		37.7	38.2			38.2	
Progression Factor		0.70			1.00		1.00	1.00			0.72	
Incremental Delay, d2		492.7			291.2		97.9	23.3			85.3	
Delay (s)		519.5			329.7		135.6	61.5			112.9	
Level of Service		F			F		F	E			F	
Approach Delay (s)		519.5			329.7			64.9			112.9	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	285.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	53.5
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗		↑↑↑	↗		↑↗		↘	↑↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.86	1.00		0.91	1.00		0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85		1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1583	5733	1417		4550	1417		3165		1583	3145	
Flt Permitted	0.17	1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)	284	5733	1417		4550	1417		3165		1583	3145	
Volume (vph)	27	1454	34	0	1416	323	0	1052	3	158	1146	55
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	28	1484	35	0	1445	330	0	1073	3	161	1169	56
RTOR Reduction (vph)	0	0	27	0	0	247	0	0	0	0	3	0
Lane Group Flow (vph)	28	1484	8	0	1445	83	0	1076	0	161	1222	0
Turn Type	Perm		Perm		Perm				Prot			
Protected Phases	2		2		2		8		7		4	
Permitted Phases	2		2		2							
Actuated Green, G (s)	24.5	24.5	24.5		24.5	24.5		31.0		5.0	31.0	
Effective Green, g (s)	23.5	23.5	23.5		23.5	23.5		32.5		5.0	32.5	
Actuated g/C Ratio	0.24	0.24	0.24		0.24	0.24		0.32		0.05	0.32	
Clearance Time (s)	3.0	3.0	3.0		3.0	3.0		5.5		4.0	5.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		5.0		3.0	4.0	
Lane Grp Cap (vph)	67	1347	333		1069	333		1029		79	1022	
v/s Ratio Prot		0.26			c0.32			0.34		c0.10	c0.39	
v/s Ratio Perm	0.10		0.01			0.06						
v/c Ratio	0.42	1.10	0.02		1.35	0.25		1.05		2.04	1.20	
Uniform Delay, d1	32.4	38.2	29.4		38.2	31.1		33.8		47.5	33.8	
Progression Factor	1.00	1.00	1.00		0.86	1.77		0.38		1.00	1.00	
Incremental Delay, d2	18.0	57.3	0.1		158.9	0.2		23.7		508.2	97.6	
Delay (s)	50.5	95.6	29.6		191.6	55.0		36.5		555.7	131.4	
Level of Service	D	F	C		F	E		D		F	F	
Approach Delay (s)		93.3			166.2			36.5			180.6	
Approach LOS		F			F			D			F	

Intersection Summary

HCM Average Control Delay	126.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	39.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95			0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.99			0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1583	4541		1583	4545		1583	3143			3065	
Flt Permitted	0.17	1.00		0.17	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	290	4541		290	4545		1583	3143			3065	
Volume (vph)	241	2115	27	85	1192	9	33	770	41	0	934	253
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	246	2158	28	87	1216	9	34	786	42	0	953	258
RTOR Reduction (vph)	0	2	0	0	1	0	0	4	0	0	24	0
Lane Group Flow (vph)	246	2184	0	87	1224	0	34	824	0	0	1187	0
Turn Type	Perm		Perm		Prot							
Protected Phases	6		6		3		8				4	
Permitted Phases	6		6									
Actuated Green, G (s)	22.1	22.1		22.1	22.1		5.0	31.0			31.0	
Effective Green, g (s)	23.0	23.0		23.0	23.0		5.0	32.5			32.5	
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.05	0.32			0.32	
Clearance Time (s)	4.9	4.9		4.9	4.9		4.0	5.5			5.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	5.0			4.0	
Lane Grp Cap (vph)	67	1044		67	1045		79	1021			996	
v/s Ratio Prot		0.48			0.27		c0.02	0.26			c0.39	
v/s Ratio Perm	c0.85			0.30								
v/c Ratio	3.67	2.09		1.30	1.17		0.43	0.81			1.19	
Uniform Delay, d1	38.5	38.5		38.5	38.5		46.1	30.9			33.8	
Progression Factor	1.00	1.00		0.70	0.70		1.00	1.00			0.26	
Incremental Delay, d2	1238.1	494.9		144.1	78.2		3.7	6.8			87.2	
Delay (s)	1276.6	533.4		171.2	105.2		49.9	37.7			95.8	
Level of Service	F	F		F	F		D	D			F	
Approach Delay (s)		608.5			109.6			38.2			95.8	
Approach LOS		F			F			D			F	

Intersection Summary

HCM Average Control Delay	304.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.08		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	39.5
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↘	↕		↘	↕	↘	↘	↕	↘
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Fr _t	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	3145		1583	3154		1583	3167	1417	1583	3167	1417
Fl _t Permitted	0.13	1.00		0.13	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	222	3145		222	3154		1583	3167	1417	1583	3167	1417
Volume (vph)	128	1359	66	33	850	24	97	691	187	79	938	80
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	133	1416	69	34	885	25	101	720	195	82	977	83
RTOR Reduction (vph)	0	4	0	0	2	0	0	0	61	0	0	46
Lane Group Flow (vph)	133	1481	0	34	908	0	101	720	134	82	977	37
Turn Type	Perm			Perm			Prot		Perm	Prot		Perm
Protected Phases	6			2			3		8	7		4
Permitted Phases	6			2					8			4
Actuated Green, G (s)	29.0	29.0		29.0	29.0		7.8	39.3	39.3	7.7	39.2	39.2
Effective Green, g (s)	30.0	30.0		30.0	30.0		7.8	40.3	40.3	7.7	40.2	40.2
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.09	0.45	0.45	0.09	0.45	0.45
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	74	1048		74	1051		137	1418	635	135	1415	633
v/s Ratio Prot		0.47			0.29		c0.06	0.23		0.05	c0.31	
v/s Ratio Perm	c0.60			0.15					0.09			0.03
v/c Ratio	1.80	1.41		0.46	0.86		0.74	0.51	0.21	0.61	0.69	0.06
Uniform Delay, d ₁	30.0	30.0		23.6	28.1		40.1	17.8	15.2	39.7	19.9	14.1
Progression Factor	0.86	0.86		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d ₂	363.7	186.5		19.2	9.4		18.5	1.3	0.8	7.5	2.8	0.2
Delay (s)	389.4	212.1		42.8	37.5		58.6	19.1	15.9	47.2	22.7	14.3
Level of Service	F	F		D	D		E	B	B	D	C	B
Approach Delay (s)		226.7			37.7			22.4			23.9	
Approach LOS		F			D			C			C	

Intersection Summary

HCM Average Control Delay	95.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶			↶↶			↶↶	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95			0.95	
Frt	1.00	0.99		1.00	0.99			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1583	4508		1583	4485			3140			3139	
Flt Permitted	0.11	1.00		0.09	1.00			1.00			0.84	
Satd. Flow (perm)	185	4508		152	4485			3140			2632	
Volume (vph)	134	1972	128	145	1284	136	0	1118	68	19	902	50
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	137	2012	131	148	1310	139	0	1141	69	19	920	51
RTOR Reduction (vph)	0	8	0	0	14	0	0	2	0	0	5	0
Lane Group Flow (vph)	137	2135	0	148	1435	0	0	1208	0	0	985	0
Turn Type	Perm		Perm				Perm					
Protected Phases	6		2				8					
Permitted Phases	6		2				4					
Actuated Green, G (s)	42.1	42.1		42.1	42.1			36.2			36.2	
Effective Green, g (s)	43.8	43.8		43.8	43.8			38.2			38.2	
Actuated g/C Ratio	0.49	0.49		0.49	0.49			0.42			0.42	
Clearance Time (s)	5.7	5.7		5.7	5.7			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	90	2194		74	2183			1333			1117	
v/s Ratio Prot		0.47			0.32			c0.38				
v/s Ratio Perm	0.74			c0.97							0.37	
v/c Ratio	1.52	0.97		2.00	0.66			0.91			0.88	
Uniform Delay, d1	23.1	22.5		23.1	17.4			24.2			23.8	
Progression Factor	0.39	0.36		0.57	0.23			1.00			1.00	
Incremental Delay, d2	240.1	2.3		474.6	0.8			9.0			8.4	
Delay (s)	249.1	10.4		487.8	4.9			33.3			32.2	
Level of Service	F	B		F	A			C			C	
Approach Delay (s)		24.8			49.6			33.3			32.2	
Approach LOS		C			D			C			C	

Intersection Summary

HCM Average Control Delay	34.2	HCM Level of Service	C
HCM Volume to Capacity ratio	1.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	109.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑↑		↗	↑↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4475		1583	4479		1583	4362		1583	4550	1417
Flt Permitted	0.13	1.00		0.13	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	224	4475		224	4479		1583	4362		1583	4550	1417
Volume (vph)	294	1771	219	336	1169	135	43	898	342	213	1655	244
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	306	1845	228	350	1218	141	45	935	356	222	1724	254
RTOR Reduction (vph)	0	17	0	0	16	0	0	39	0	0	0	135
Lane Group Flow (vph)	306	2056	0	350	1343	0	45	1252	0	222	1724	119
Turn Type	Perm			Perm			Prot			Prot		Perm
Protected Phases	4			8			5			1		6
Permitted Phases	4			8			2					6
Actuated Green, G (s)	27.7	27.7		27.7	27.7		5.0	33.0		14.3	41.3	41.3
Effective Green, g (s)	29.7	29.7		29.7	29.7		6.0	34.0		14.3	42.3	42.3
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.07	0.38		0.16	0.47	0.47
Clearance Time (s)	6.0	6.0		6.0	6.0		5.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	4.0	4.0		4.0	4.0		2.0	4.0		2.0	4.0	4.0
Lane Grp Cap (vph)	74	1477		74	1478		106	1648		252	2139	666
v/s Ratio Prot		0.46			0.30		0.03			c0.14	c0.38	
v/s Ratio Perm	1.36			c1.56				0.29				0.08
v/c Ratio	4.14	1.39		4.73	0.91		0.42	0.76		0.88	0.81	0.18
Uniform Delay, d1	30.1	30.1		30.1	28.9		40.3	24.4		37.0	20.3	13.8
Progression Factor	1.00	1.00		0.36	0.31		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1442.2	180.5		1704.4	8.6		1.0	3.4		27.4	3.4	0.6
Delay (s)	1472.3	210.7		1715.2	17.6		41.3	27.8		64.4	23.7	14.4
Level of Service	F	F		F	B		D	C		E	C	B
Approach Delay (s)		372.9			365.3			28.2			26.7	
Approach LOS		F			F			C			C	

Intersection Summary

HCM Average Control Delay	210.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.23		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	119.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	0.92
Flpb, ped/bikes	0.98	1.00		1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	1.00
Satd. Flow (prot)	1559	4540		1577	4510			1584			1645	1306
Flt Permitted	0.14	1.00		0.06	1.00			0.96			0.92	1.00
Satd. Flow (perm)	233	4540		98	4510			1532			1523	1306
Volume (vph)	80	1969	14	25	1353	39	25	182	50	23	117	262
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	85	2095	15	27	1439	41	27	194	53	24	124	279
RTOR Reduction (vph)	0	1	0	0	3	0	0	8	0	0	0	37
Lane Group Flow (vph)	85	2109	0	27	1477	0	0	266	0	0	148	242
Confl. Peds. (#/hr)	67		64	64		67	46		45	45		46
Confl. Bikes (#/hr)			7			5			5			6
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	69.0	69.0		69.0	69.0			25.0			25.0	25.0
Effective Green, g (s)	68.0	68.0		68.0	68.0			24.0			24.0	24.0
Actuated g/C Ratio	0.68	0.68		0.68	0.68			0.24			0.24	0.24
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0			3.0			3.0	3.0
Lane Grp Cap (vph)	158	3087		67	3067			368			366	313
v/s Ratio Prot		c0.46			0.33							
v/s Ratio Perm	0.37			0.27				0.17			0.10	c0.19
v/c Ratio	0.54	0.68		0.40	0.48			0.72			0.40	0.77
Uniform Delay, d1	8.1	9.6		7.1	7.6			34.9			32.0	35.5
Progression Factor	0.71	0.46		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.2	0.1		17.1	0.5			11.6			3.3	16.8
Delay (s)	6.9	4.5		24.1	8.2			46.5			35.3	52.2
Level of Service	A	A		C	A			D			D	D
Approach Delay (s)		4.6			8.4			46.5			46.4	
Approach LOS		A			A			D			D	

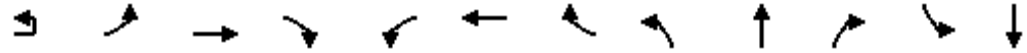
Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘↗	↑↑↗		↘↗	↑↑↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.91		0.97	0.91	
Frbp, ped/bikes	1.00	1.00	0.75	1.00	0.92		1.00	0.97		1.00	0.95	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1574	3167	1060	1583	2823		3072	4395		3072	4217	
Flt Permitted	0.15	1.00	1.00	0.11	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	243	3167	1060	185	2823		3072	4395		3072	4217	
Volume (vph)	362	1161	87	225	561	178	61	2101	123	151	1593	276
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	385	1235	93	239	597	189	65	2235	131	161	1695	294
RTOR Reduction (vph)	0	0	47	0	25	0	0	6	0	0	20	0
Lane Group Flow (vph)	385	1235	46	239	761	0	65	2360	0	161	1969	0
Conf. Peds. (#/hr)	211		160	160		211	310		128	128		310
Conf. Bikes (#/hr)			10			8			9			7
Turn Type	pm+pt		Perm	pm+pt			Prot			Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6		6	2								
Actuated Green, G (s)	49.6	34.6	34.6	49.6	34.6		9.6	44.2		8.8	43.4	
Effective Green, g (s)	50.0	36.0	36.0	50.0	36.0		9.6	45.2		8.8	44.4	
Actuated g/C Ratio	0.42	0.30	0.30	0.42	0.30		0.08	0.38		0.07	0.37	
Clearance Time (s)	3.0	5.4	5.4	3.0	5.4		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	257	950	318	240	847		246	1655		225	1560	
v/s Ratio Prot	c0.18	0.39		0.12	0.27		0.02	c0.54		0.05	c0.47	
v/s Ratio Perm	c0.45		0.04	0.30								
v/c Ratio	1.50	1.30	0.14	1.00	0.90		0.26	1.43		0.72	1.26	
Uniform Delay, d1	29.0	42.0	30.7	55.1	40.2		51.9	37.4		54.4	37.8	
Progression Factor	1.29	0.96	1.18	1.00	1.00		0.95	0.92		1.20	0.44	
Incremental Delay, d2	226.0	135.7	0.0	56.6	14.3		0.4	194.1		1.0	118.6	
Delay (s)	263.3	176.0	36.3	111.7	54.5		49.4	228.3		66.3	135.1	
Level of Service	F	F	D	F	D		D	F		E	F	
Approach Delay (s)		188.1			67.9			223.5			129.9	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	165.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	116.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↱		↑↑↑		↱	↑↑↑	↱	↱		↱	↱↱	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00		0.91		1.00	0.86	0.86	1.00		1.00	0.97	
Frt	1.00		1.00		1.00	0.96	0.85	1.00		0.85	1.00	
Flt Protected	0.95		1.00		0.95	1.00	1.00	0.95		1.00	0.95	
Satd. Flow (prot)	1583		4538		1583	4129	1218	1583		1417	3072	
Flt Permitted	0.95		1.00		0.95	1.00	1.00	0.95		1.00	0.95	
Satd. Flow (perm)	1583		4538		1583	4129	1218	1583		1417	3072	
Volume (vph)	21	0	1178	21	14	865	888	36	0	46	994	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	22	0	1253	22	15	920	945	38	0	49	1057	0
RTOR Reduction (vph)	0	0	1	0	0	53	363	0	0	47	0	0
Lane Group Flow (vph)	22	0	1274	0	15	1199	250	38	0	2	1057	0
Turn Type	Prot				Prot		Perm	Prot			custom	custom
Protected Phases	5		2		1		6			7		
Permitted Phases							6				7	8
Actuated Green, G (s)	4.1		50.0		2.0	47.0	47.0	4.0		4.0	42.2	
Effective Green, g (s)	6.0		51.0		3.9	48.9	48.9	5.0		5.0	44.1	
Actuated g/C Ratio	0.05		0.42		0.03	0.41	0.41	0.04		0.04	0.37	
Clearance Time (s)	5.9		5.0		5.9	5.9	5.9	5.0		5.0	5.9	
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	79		1929		51	1683	496	66		59	1129	
v/s Ratio Prot	0.01		c0.28		0.01	c0.29		c0.02				
v/s Ratio Perm							0.21			0.00	c0.34	
v/c Ratio	0.28		0.66		0.29	0.71	0.50	0.58		0.03	0.94	
Uniform Delay, d1	54.9		27.6		56.7	29.7	26.5	56.5		55.2	36.6	
Progression Factor	1.21		1.38		1.04	1.75	9.66	1.00		1.00	1.16	
Incremental Delay, d2	0.2		0.2		1.9	1.5	2.1	11.6		0.2	9.0	
Delay (s)	66.6		38.3		60.6	53.5	258.1	68.0		55.4	51.5	
Level of Service	E		D		E	D	F	E		E	D	
Approach Delay (s)			38.8			120.3			60.9			51.8
Approach LOS			D			F			E			D
Intersection Summary												
HCM Average Control Delay			77.5									HCM Level of Service E
HCM Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			120.0							12.0		
Intersection Capacity Utilization			71.8%									ICU Level of Service C
Analysis Period (min)			15									
c Critical Lane Group												



Movement	SBR
Lane Configurations	7
Ideal Flow (vphpl)	1700
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1417
Flt Permitted	1.00
Satd. Flow (perm)	1417
Volume (vph)	66
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	70
RTOR Reduction (vph)	42
Lane Group Flow (vph)	28
Turn Type	custom
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	42.2
Effective Green, g (s)	44.1
Actuated g/C Ratio	0.37
Clearance Time (s)	5.9
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	521
v/s Ratio Prot	
v/s Ratio Perm	0.02
v/c Ratio	0.05
Uniform Delay, d1	24.5
Progression Factor	2.28
Incremental Delay, d2	0.1
Delay (s)	55.9
Level of Service	E
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑	↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor		0.86	1.00		0.86	1.00	1.00	0.91			0.91	
Frt		1.00	0.85		1.00	0.85	1.00	1.00			0.98	
Flt Protected		1.00	1.00		1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)		5733	1417		5733	1417	1583	4549			4445	
Flt Permitted		1.00	1.00		1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)		5733	1417		5733	1417	1583	4549			4445	
Volume (vph)	0	1588	358	0	1254	369	196	2041	2	0	1757	321
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1637	369	0	1293	380	202	2104	2	0	1811	331
RTOR Reduction (vph)	0	0	3	0	0	8	0	0	0	0	22	0
Lane Group Flow (vph)	0	1637	366	0	1293	372	202	2106	0	0	2120	0
Turn Type		pm+ov			Perm		Prot					
Protected Phases		8	1		4		1	6			2	
Permitted Phases		8	8			4						
Actuated Green, G (s)		34.2	49.2		34.2	34.2	15.0	73.8			53.3	
Effective Green, g (s)		36.2	52.7		36.2	36.2	16.5	75.8			55.3	
Actuated g/C Ratio		0.30	0.44		0.30	0.30	0.14	0.63			0.46	
Clearance Time (s)		6.0	5.5		6.0	6.0	5.5	6.0			6.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)		1729	670		1729	427	218	2873			2048	
v/s Ratio Prot		c0.29	0.08		0.23		c0.13	0.46			c0.48	
v/s Ratio Perm			0.18			0.26						
v/c Ratio		0.95	0.55		0.75	0.87	0.93	0.73			1.04	
Uniform Delay, d1		41.0	24.8		37.8	39.7	51.2	15.2			32.4	
Progression Factor		1.23	1.15		1.00	1.00	1.07	0.78			0.26	
Incremental Delay, d2		8.7	0.6		3.0	21.0	31.3	1.1			17.9	
Delay (s)		59.1	29.2		40.8	60.7	86.0	12.9			26.3	
Level of Service		E	C		D	E	F	B			C	
Approach Delay (s)		53.6			45.3			19.3			26.3	
Approach LOS		D			D			B			C	

Intersection Summary

HCM Average Control Delay	35.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑↑↑		↕	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.99			0.97		1.00	1.00		1.00	0.99	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1608			1606		1583	4528		1583	4507	
Flt Permitted		0.80			0.95		0.08	1.00		0.06	1.00	
Satd. Flow (perm)		1314			1529		129	4528		99	4507	
Volume (vph)	213	179	34	10	48	17	36	2004	67	132	1776	119
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	217	183	35	10	49	17	37	2045	68	135	1812	121
RTOR Reduction (vph)	0	2	0	0	8	0	0	3	0	0	6	0
Lane Group Flow (vph)	0	433	0	0	68	0	37	2110	0	135	1927	0
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0		83.4	83.4		83.4	83.4	
Effective Green, g (s)		29.0			29.0		83.0	83.0		83.0	83.0	
Actuated g/C Ratio		0.24			0.24		0.69	0.69		0.69	0.69	
Clearance Time (s)		3.0			3.0		3.6	3.6		3.6	3.6	
Vehicle Extension (s)		3.0			3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		318			370		89	3132		68	3117	
v/s Ratio Prot								0.47			0.43	
v/s Ratio Perm		c0.33			0.04		0.29			c1.36		
v/c Ratio		1.36			0.18		0.42	0.67		1.99	0.62	
Uniform Delay, d1		45.5			36.1		8.0	10.7		18.5	10.0	
Progression Factor		1.00			1.00		1.00	1.00		0.65	0.31	
Incremental Delay, d2		181.4			1.1		13.7	1.2		459.8	0.3	
Delay (s)		226.9			37.2		21.7	11.9		471.8	3.4	
Level of Service		F			D		C	B		F	A	
Approach Delay (s)		226.9			37.2			12.0			34.0	
Approach LOS		F			D			B			C	

Intersection Summary

HCM Average Control Delay	41.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 39: Wilshire Blvd & La Cienega Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑↑		↗	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.94		1.00	0.99		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	1.00		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4170		1583	4508		1583	4476		1583	4408	
Flt Permitted	0.12	1.00		0.12	1.00		0.11	1.00		0.12	1.00	
Satd. Flow (perm)	194	4170		194	4508		180	4476		193	4408	
Volume (vph)	188	1949	461	177	1408	39	205	1958	121	59	1592	180
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	200	2073	490	188	1498	41	218	2083	129	63	1694	191
RTOR Reduction (vph)	0	39	0	0	3	0	0	6	0	0	14	0
Lane Group Flow (vph)	200	2524	0	188	1536	0	218	2206	0	63	1871	0
Conf. Peds. (#/hr)	131		201	201		131	103		84	84		103
Conf. Bikes (#/hr)			6			13			4			11
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	43.9	34.9		43.9	34.9		45.0	37.0		40.2	34.6	
Effective Green, g (s)	42.4	34.4		42.4	34.4		44.0	37.0		39.2	34.6	
Actuated g/C Ratio	0.42	0.34		0.42	0.34		0.44	0.37		0.39	0.35	
Clearance Time (s)	3.0	3.5		3.0	3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	193	1434		193	1551		177	1656		140	1525	
v/s Ratio Prot	c0.08	c0.61		0.08	0.34		c0.09	c0.49		0.02	0.42	
v/s Ratio Perm	0.36			0.33			0.45			0.16		
v/c Ratio	1.04	1.76		0.97	0.99		1.23	1.33		0.45	1.23	
Uniform Delay, d1	23.3	32.8		48.0	32.6		48.7	31.5		25.2	32.7	
Progression Factor	0.85	0.85		1.50	0.95		1.72	0.81		1.00	1.00	
Incremental Delay, d2	59.3	343.6		51.9	19.0		127.1	151.6		0.8	108.2	
Delay (s)	79.2	371.5		123.8	50.1		210.9	177.3		26.1	140.9	
Level of Service	E	F		F	D		F	F		C	F	
Approach Delay (s)		350.4			58.1			180.3			137.2	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	200.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	131.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕↕↕		↗	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes		0.96			1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.99		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1502			1604		1583	4486		1583	4498	
Flt Permitted		0.88			0.32		0.06	1.00		0.06	1.00	
Satd. Flow (perm)		1328			533		104	4486		104	4498	
Volume (vph)	115	312	280	116	106	19	57	2084	116	23	2035	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	121	328	295	122	112	20	60	2194	122	24	2142	63
RTOR Reduction (vph)	0	5	0	0	3	0	0	6	0	0	3	0
Lane Group Flow (vph)	0	739	0	0	251	0	60	2310	0	24	2202	0
Conf. Peds. (#/hr)	29		64	64		29	102		42	42		102
Conf. Bikes (#/hr)			4			5			5			15
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.0			29.0		64.2	64.2		64.2	64.2	
Effective Green, g (s)		28.0			28.0		64.0	64.0		64.0	64.0	
Actuated g/C Ratio		0.28			0.28		0.64	0.64		0.64	0.64	
Clearance Time (s)		3.0			3.0		3.8	3.8		3.8	3.8	
Vehicle Extension (s)		3.0			3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		372			149		67	2871		67	2879	
v/s Ratio Prot								0.51			0.49	
v/s Ratio Perm		c0.56			0.47		c0.58			0.23		
v/c Ratio		1.99			1.69		0.90	0.80		0.36	0.76	
Uniform Delay, d1		36.0			36.0		15.2	13.4		8.4	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.30	1.18	
Incremental Delay, d2		453.4			335.7		83.2	2.5		1.3	0.2	
Delay (s)		489.4			371.7		98.3	15.9		12.3	15.2	
Level of Service		F			F		F	B		B	B	
Approach Delay (s)		489.4			371.7			18.0			15.1	
Approach LOS		F			F			B			B	
Intersection Summary												
HCM Average Control Delay			95.5				HCM Level of Service			F		
HCM Volume to Capacity ratio			1.23									
Actuated Cycle Length (s)			100.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			107.5%				ICU Level of Service			G		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶		↶	↶↶↶		↶	↶↶↶	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4514		1583	4532		1583	4518		1583	4435	
Flt Permitted	0.14	1.00		0.12	1.00		0.12	1.00		0.12	1.00	
Satd. Flow (perm)	238	4514		208	4532		196	4518		196	4435	
Volume (vph)	360	2401	134	124	1604	44	126	1809	89	246	1744	353
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	387	2582	144	133	1725	47	135	1945	96	265	1875	380
RTOR Reduction (vph)	0	7	0	0	3	0	0	6	0	0	31	0
Lane Group Flow (vph)	387	2719	0	133	1769	0	135	2035	0	265	2224	0
Turn Type	Perm		pm+pt		pm+pt		pm+pt		pm+pt			
Protected Phases	6		5		2		3		8		7	
Permitted Phases	6		2				8				4	
Actuated Green, G (s)	27.0	27.0	36.0		36.0	39.9		33.0	40.1		33.1	
Effective Green, g (s)	28.0	28.0	37.0		37.0	40.9		34.0	41.1		34.1	
Actuated g/C Ratio	0.31	0.31	0.41		0.41	0.45		0.38	0.46		0.38	
Clearance Time (s)	5.0	5.0	3.5		5.0	4.0		5.0	4.0		5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	74	1404	162		1863	195		1707	197		1680	
v/s Ratio Prot	0.60		0.05		c0.39	0.05		0.45	c0.10		0.50	
v/s Ratio Perm	c1.63		0.29			0.26			c0.51			
v/c Ratio	5.23	1.94	0.82		0.95	0.69		1.19	1.35		1.32	
Uniform Delay, d1	31.0	31.0	43.8		25.6	21.1		28.0	43.7		27.9	
Progression Factor	1.41	1.41	1.00		1.00	1.56		0.47	1.00		1.00	
Incremental Delay, d2	1906.1	421.7	27.1		11.9	1.0		87.2	185.2		150.0	
Delay (s)	1949.8	465.6	71.0		37.5	33.9		100.3	228.9		177.9	
Level of Service	F		E		D	C		F	F		F	
Approach Delay (s)	650.1				39.9	96.2			183.3			
Approach LOS	F				D	F			F			

Intersection Summary

HCM Average Control Delay	285.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	132.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕		↔	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Fr _t	1.00	0.97		1.00	0.98		1.00	0.98		1.00	0.98	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3068		1583	3105		1583	4467		1583	4478	
Fl _t Permitted	0.28	1.00		0.13	1.00		0.12	1.00		0.14	1.00	
Satd. Flow (perm)	460	3068		222	3105		202	4467		230	4478	
Volume (vph)	209	1231	324	173	763	113	382	1736	239	195	1842	219
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	225	1324	348	186	820	122	411	1867	257	210	1981	235
RTOR Reduction (vph)	0	26	0	0	3	0	0	20	0	0	16	0
Lane Group Flow (vph)	225	1646	0	186	939	0	411	2104	0	210	2200	0
Turn Type	Perm		pm+pt		pm+pt		Perm					
Protected Phases	8		7		4		1		6		2	
Permitted Phases	8		4				6				2	
Actuated Green, G (s)	25.0	25.0		38.0	38.0		42.0	42.0		28.0	28.0	
Effective Green, g (s)	26.0	26.0		39.0	39.0		43.0	43.0		29.0	29.0	
Actuated g/C Ratio	0.29	0.29		0.43	0.43		0.48	0.48		0.32	0.32	
Clearance Time (s)	5.0	5.0		3.0	5.0		4.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	133	886		232	1346		250	2134		74	1443	
v/s Ratio Prot	c0.54		c0.08		0.30		c0.18		0.47		0.49	
v/s Ratio Perm	0.49		0.27				0.60				c0.91	
v/c Ratio	1.69	1.86		0.80	0.70		1.64	0.99		2.84	1.52	
Uniform Delay, d ₁	32.0	32.0		41.3	20.7		42.2	23.2		30.5	30.5	
Progression Factor	1.00	1.00		1.82	1.77		1.00	1.00		0.86	0.86	
Incremental Delay, d ₂	341.5	390.2		12.2	2.0		307.1	16.5		830.4	236.3	
Delay (s)	373.5	422.2		87.4	38.6		349.4	39.7		856.6	262.5	
Level of Service	F	F		F	D		F	D		F	F	
Approach Delay (s)	416.4				46.7		89.9				313.9	
Approach LOS	F				D		F				F	

Intersection Summary

HCM Average Control Delay	229.4	HCM Level of Service	F
HCM Volume to Capacity ratio	2.09		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	142.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.98		1.00	0.97		1.00	0.97		1.00	0.98	
Flpb, ped/bikes	0.96	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1523	3060		1568	3016		1583	2976		1583	3045	
Flt Permitted	0.23	1.00		0.11	1.00		0.11	1.00		0.10	1.00	
Satd. Flow (perm)	365	3060		174	3016		176	2976		170	3045	
Volume (vph)	140	1091	158	27	757	121	86	860	232	265	971	111
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	144	1125	163	28	780	125	89	887	239	273	1001	114
RTOR Reduction (vph)	0	9	0	0	11	0	0	19	0	0	7	0
Lane Group Flow (vph)	144	1279	0	28	894	0	89	1107	0	273	1108	0
Conf. Peds. (#/hr)	100		100	100		100	100		100	100		100
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	6		2		2		8		8		4	
Permitted Phases	6		2		2		8		8		4	
Actuated Green, G (s)	59.6	59.6		59.6	59.6		49.1	49.1		49.1	49.1	
Effective Green, g (s)	61.5	61.5		61.5	61.5		50.5	50.5		50.5	50.5	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.42	0.42		0.42	0.42	
Clearance Time (s)	5.9	5.9		5.9	5.9		5.4	5.4		5.4	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	187	1568		89	1546		74	1252		72	1281	
v/s Ratio Prot		c0.42			0.30			0.37				0.36
v/s Ratio Perm	0.39			0.16			0.51			c1.61		
v/c Ratio	0.77	0.82		0.31	0.58		1.20	0.88		3.79	0.86	
Uniform Delay, d1	23.6	24.5		17.0	20.3		34.8	32.1		34.8	31.6	
Progression Factor	1.00	1.00		0.62	0.61		0.77	0.81		1.00	1.00	
Incremental Delay, d2	25.8	4.8		2.8	0.5		161.2	8.1		1289.3	8.0	
Delay (s)	49.4	29.3		13.4	12.9		188.0	34.1		1324.1	39.6	
Level of Service	D	C		B	B		F	C		F	D	
Approach Delay (s)		31.3			13.0			45.4			292.2	
Approach LOS		C			B			D			F	

Intersection Summary

HCM Average Control Delay	104.2	HCM Level of Service	F
HCM Volume to Capacity ratio	2.17		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1583	4510		1583	4542			1614			1634	
Flt Permitted	0.08	1.00		0.06	1.00			0.97			0.98	
Satd. Flow (perm)	134	4510		100	4542			1571			1611	
Volume (vph)	46	2310	143	71	1734	21	13	103	30	14	215	33
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	49	2484	154	76	1865	23	14	111	32	15	231	35
RTOR Reduction (vph)	0	7	0	0	1	0	0	5	0	0	5	0
Lane Group Flow (vph)	49	2631	0	76	1887	0	0	153	0	0	276	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	68.0	68.0		68.0	68.0			26.0			26.0	
Effective Green, g (s)	67.0	67.0		67.0	67.0			25.0			25.0	
Actuated g/C Ratio	0.67	0.67		0.67	0.67			0.25			0.25	
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0			3.0			3.0	
Lane Grp Cap (vph)	90	3022		67	3043			393			403	
v/s Ratio Prot		0.58			0.42							
v/s Ratio Perm	0.37			c0.76				0.10			c0.17	
v/c Ratio	0.54	0.87		1.13	0.62			0.39			0.68	
Uniform Delay, d1	8.6	13.1		16.5	9.3			31.1			33.9	
Progression Factor	0.55	0.60		0.86	0.50			1.00			1.00	
Incremental Delay, d2	2.1	0.4		93.8	0.2			2.9			9.1	
Delay (s)	6.9	8.1		108.0	4.9			34.0			43.0	
Level of Service	A	A		F	A			C			D	
Approach Delay (s)		8.1			8.9			34.0			43.0	
Approach LOS		A			A			C			D	

Intersection Summary

HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↘	↘	↑↑↑	↘	↘	↑	↘	↘	↘	↘
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.99
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	3167	1417	1583	4550	1417	1583	1667	1417	1583	1645	1645
Flt Permitted	0.27	1.00	1.00	0.27	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	444	3167	1417	444	4550	1417	1583	1667	1417	1583	1645	1645
Volume (vph)	164	889	180	111	938	58	82	727	33	201	675	63
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	174	946	191	118	998	62	87	773	35	214	718	67
RTOR Reduction (vph)	0	0	143	0	0	47	0	0	4	0	6	0
Lane Group Flow (vph)	174	946	48	118	998	16	87	773	31	214	779	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4			4		1	2		1	6	
Permitted Phases	4		4	4		4			2			
Actuated Green, G (s)	14.0	14.0	14.0	14.0	14.0	14.0	4.0	28.2	28.2	4.0	28.2	
Effective Green, g (s)	15.0	15.0	15.0	15.0	15.0	15.0	4.0	29.0	29.0	4.0	29.0	
Actuated g/C Ratio	0.25	0.25	0.25	0.25	0.25	0.25	0.07	0.48	0.48	0.07	0.48	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.8	4.8	4.0	4.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	792	354	111	1138	354	106	806	685	106	795	
v/s Ratio Prot		0.30			0.22		0.05	0.46		c0.14	c0.47	
v/s Ratio Perm	c0.39		0.03	0.27		0.01			0.02			
v/c Ratio	1.57	1.19	0.13	1.06	0.88	0.04	0.82	0.96	0.05	2.02	0.98	
Uniform Delay, d1	22.5	22.5	17.5	22.5	21.6	17.1	27.6	14.9	8.2	28.0	15.2	
Progression Factor	1.00	1.00	1.00	1.30	1.25	1.06	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	294.3	99.7	0.8	96.5	8.3	0.2	37.7	23.2	0.1	490.0	27.5	
Delay (s)	316.8	122.2	18.3	125.8	35.2	18.3	65.4	38.1	8.3	518.0	42.7	
Level of Service	F	F	B	F	D	B	E	D	A	F	D	
Approach Delay (s)		132.9			43.4			39.6			144.5	
Approach LOS		F			D			D			F	

Intersection Summary

HCM Average Control Delay	92.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↗↖		↖	↗↖	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4500		1583	4532		1583	3082		1583	3146	
Flt Permitted	0.10	1.00		0.10	1.00		0.13	1.00		0.16	1.00	
Satd. Flow (perm)	161	4500		161	4532		218	3082		261	3146	
Volume (vph)	148	2413	192	214	1602	43	189	648	140	73	740	33
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	153	2488	198	221	1652	44	195	668	144	75	763	34
RTOR Reduction (vph)	0	9	0	0	3	0	0	17	0	0	3	0
Lane Group Flow (vph)	153	2677	0	221	1693	0	195	795	0	75	794	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	50.4	42.4		50.4	42.4		39.6	31.6		35.6	29.6	
Effective Green, g (s)	48.4	41.4		48.4	41.4		37.6	30.6		33.6	28.6	
Actuated g/C Ratio	0.48	0.41		0.48	0.41		0.38	0.31		0.34	0.29	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	177	1863		177	1876		178	943		154	900	
v/s Ratio Prot	0.06	c0.59		c0.09	0.37		c0.08	0.26		0.02	0.25	
v/s Ratio Perm	0.36			0.52			c0.34			0.14		
v/c Ratio	0.86	1.44		1.25	0.90		1.10	0.84		0.49	0.88	
Uniform Delay, d1	20.2	29.3		48.7	27.4		26.7	32.4		24.5	34.1	
Progression Factor	1.88	1.48		1.67	1.78		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.1	196.8		143.2	6.1		95.3	9.1		0.9	12.2	
Delay (s)	42.0	240.1		224.3	54.9		122.0	41.5		25.4	46.3	
Level of Service	D	F		F	D		F	D		C	D	
Approach Delay (s)		229.4			74.4			57.1			44.5	
Approach LOS		F			E			E			D	

Intersection Summary

HCM Average Control Delay	134.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	119.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	0.99		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4535		1583	4525		1583	3070		1583	3014	
Flt Permitted	0.11	1.00		0.10	1.00		0.14	1.00		0.17	1.00	
Satd. Flow (perm)	186	4535		174	4525		238	3070		275	3014	
Volume (vph)	70	2678	60	435	1440	55	226	865	222	43	651	307
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	74	2849	64	463	1532	59	240	920	236	46	693	327
RTOR Reduction (vph)	0	2	0	0	5	0	0	23	0	0	61	0
Lane Group Flow (vph)	74	2911	0	463	1586	0	240	1133	0	46	959	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	42.3	36.8		47.3	39.3		36.2	29.0		29.4	25.2	
Effective Green, g (s)	40.3	35.8		45.3	38.3		35.0	28.0		27.4	24.2	
Actuated g/C Ratio	0.45	0.40		0.50	0.43		0.39	0.31		0.30	0.27	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	153	1804		197	1926		197	955		130	810	
v/s Ratio Prot	0.02	0.64		c0.18	0.35		c0.09	0.37		0.01	0.32	
v/s Ratio Perm	0.19			c1.00			c0.38			0.09		
v/c Ratio	0.48	1.61		2.35	0.82		1.22	1.19		0.35	1.18	
Uniform Delay, d1	16.7	27.1		43.7	22.9		25.3	31.0		25.6	32.9	
Progression Factor	1.00	1.00		1.41	0.74		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	278.6		611.3	1.0		135.3	94.3		0.6	95.0	
Delay (s)	17.6	305.7		672.7	18.0		160.5	125.3		26.2	127.9	
Level of Service	B	F		F	B		F	F		C	F	
Approach Delay (s)		298.6			165.6			131.4			123.5	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	206.2	HCM Level of Service	F
HCM Volume to Capacity ratio	2.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	144.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↑	↗	↖	↗↖↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91			0.91		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.99			0.99		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	4520			4524		1583	1667	1417	1583	3084	
Flt Permitted	0.09	1.00			1.00		0.23	1.00	1.00	0.36	1.00	
Satd. Flow (perm)	150	4520			4524		390	1667	1417	606	3084	
Volume (vph)	239	2578	117	0	1839	73	110	376	24	15	491	103
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	254	2743	124	0	1956	78	117	400	26	16	522	110
RTOR Reduction (vph)	0	4	0	0	4	0	0	0	17	0	17	0
Lane Group Flow (vph)	254	2863	0	0	2030	0	117	400	9	16	615	0
Turn Type	pm+pt			pm+pt			pm+pt			Perm	pm+pt	
Protected Phases	5	2		1	6		3	8		8	4	
Permitted Phases	2			6			8			8	4	
Actuated Green, G (s)	51.4	51.4			41.4		42.6	37.2	37.2	35.2	32.8	
Effective Green, g (s)	50.4	50.4			40.4		41.6	36.2	36.2	33.2	31.8	
Actuated g/C Ratio	0.50	0.50			0.40		0.42	0.36	0.36	0.33	0.32	
Clearance Time (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Vehicle Extension (s)	2.0	5.0			5.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	162	2278			1828		231	603	513	215	981	
v/s Ratio Prot	c0.09	0.63			0.45		c0.03	c0.24		0.00	0.20	
v/s Ratio Perm	c0.70						0.18		0.01	0.02		
v/c Ratio	1.57	1.26			1.11		0.51	0.66	0.02	0.07	0.63	
Uniform Delay, d1	24.9	24.8			29.8		19.9	26.8	20.5	23.0	29.0	
Progression Factor	1.05	1.12			1.81		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	277.1	118.4			54.3		0.6	5.7	0.1	0.1	3.0	
Delay (s)	303.3	146.2			108.3		20.5	32.5	20.6	23.1	32.1	
Level of Service	F	F			F		C	C	C	C	C	
Approach Delay (s)		159.0			108.3			29.3			31.9	
Approach LOS		F			F			C			C	

Intersection Summary

HCM Average Control Delay	118.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕		↔	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	2228		1118	2223		1118	2194		1118	2215	
Flt Permitted	0.07	1.00		0.07	1.00		0.40	1.00		0.25	1.00	
Satd. Flow (perm)	77	2228		77	2223		474	2194		298	2215	
Volume (vph)	13	2296	51	94	1876	72	93	465	66	100	352	23
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	13	2367	53	97	1934	74	96	479	68	103	363	24
RTOR Reduction (vph)	0	2	0	0	3	0	0	7	0	0	5	0
Lane Group Flow (vph)	13	2418	0	97	2005	0	96	540	0	103	382	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	60.5	60.5		60.5	60.5		20.8	20.8		20.8	20.8	
Effective Green, g (s)	61.0	61.0		61.0	61.0		21.0	21.0		21.0	21.0	
Actuated g/C Ratio	0.68	0.68		0.68	0.68		0.23	0.23		0.23	0.23	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	52	1510		52	1507		111	512		70	517	
v/s Ratio Prot		1.09			0.90			0.25			0.17	
v/s Ratio Perm	0.17			c1.26			0.20			c0.35		
v/c Ratio	0.25	1.60		1.87	1.33		0.86	1.05		1.47	0.74	
Uniform Delay, d1	5.6	14.5		14.5	14.5		33.1	34.5		34.5	32.0	
Progression Factor	0.46	0.36		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	271.0		453.5	153.4		54.7	55.0		274.2	9.1	
Delay (s)	3.6	276.2		468.0	167.9		87.8	89.5		308.7	41.1	
Level of Service	A	F		F	F		F	F		F	D	
Approach Delay (s)		274.7			181.7			89.3			97.3	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	203.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	157.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						0.95			0.95	
Frbp, ped/bikes		0.99						0.99			1.00	
Flpb, ped/bikes		1.00						1.00			1.00	
Frt		0.99						0.98			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		3053						3081			3128	
Flt Permitted		0.99						1.00			0.80	
Satd. Flow (perm)		3053						3081			2520	
Volume (vph)	210	544	76	0	0	0	0	374	51	71	406	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	228	591	83	0	0	0	0	407	55	77	441	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	895		0	0	0	0	444	0	0	518	0
Conf. Peds. (#/hr)	5	38						63	59	59		63
Conf. Bikes (#/hr)		5							1			1
Turn Type	Perm						Perm					
Protected Phases		2						8			4	
Permitted Phases	2								4			
Actuated Green, G (s)		37.0						17.0			17.0	
Effective Green, g (s)		36.0						16.0			16.0	
Actuated g/C Ratio		0.60						0.27			0.27	
Clearance Time (s)		3.0						3.0			3.0	
Vehicle Extension (s)		5.0						3.0			3.0	
Lane Grp Cap (vph)		1832						822			672	
v/s Ratio Prot								0.14				
v/s Ratio Perm		0.29									c0.21	
v/c Ratio		0.49						0.54			0.77	
Uniform Delay, d1		6.8						18.9			20.3	
Progression Factor		0.67						1.00			1.00	
Incremental Delay, d2		0.4						2.5			8.3	
Delay (s)		5.0						21.4			28.6	
Level of Service		A						C			C	
Approach Delay (s)		5.0			0.0			21.4			28.6	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM Average Control Delay		15.5			HCM Level of Service			B				
HCM Volume to Capacity ratio		0.58										
Actuated Cycle Length (s)		60.0			Sum of lost time (s)			8.0				
Intersection Capacity Utilization		65.4%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												



























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑				↗		↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0				4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91				1.00		1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99				0.94		1.00	0.92
Flpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		0.95	1.00
Frt	1.00	1.00		1.00	0.98				0.86		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00				1.00		0.95	1.00
Satd. Flow (prot)	1583	4523		1583	4385				1355		1513	1302
Flt Permitted	0.95	1.00		0.95	1.00				1.00		0.95	1.00
Satd. Flow (perm)	1583	4523		1583	4385				1355		1513	1302
Volume (vph)	143	2018	46	21	1713	322	0	0	87	372	10	244
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	149	2102	48	22	1784	335	0	0	91	388	10	254
RTOR Reduction (vph)	0	2	0	0	27	0	0	0	68	0	0	146
Lane Group Flow (vph)	149	2148	0	22	2092	0	0	0	23	0	398	109
Conf. Peds. (#/hr)	26		44	44		26	50		36	36		50
Conf. Bikes (#/hr)			5			6						3
Turn Type	Prot			Prot				custom	Perm		Perm	
Protected Phases	5	2		1	6						4	
Permitted Phases								8	4			4
Actuated Green, G (s)	11.5	62.1		2.9	53.5			26.0			26.0	26.0
Effective Green, g (s)	10.5	61.1		1.9	52.5			25.0			25.0	25.0
Actuated g/C Ratio	0.10	0.61		0.02	0.52			0.25			0.25	0.25
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Vehicle Extension (s)	2.0	5.0		2.0	5.0			3.0			3.0	3.0
Lane Grp Cap (vph)	166	2764		30	2302			339			378	326
v/s Ratio Prot	c0.09	0.47		0.01	c0.48							
v/s Ratio Perm								0.02			0.26	0.08
v/c Ratio	0.90	0.78		0.73	0.91			0.07			1.05	0.33
Uniform Delay, d1	44.2	14.4		48.8	21.6			28.6			37.5	30.7
Progression Factor	1.00	1.00		0.61	1.69			1.00			1.00	1.00
Incremental Delay, d2	40.5	2.2		7.0	0.7			0.4			60.9	2.7
Delay (s)	84.8	16.6		36.8	37.2			29.0			98.4	33.4
Level of Service	F	B		D	D			C			F	C
Approach Delay (s)		21.0			37.2			29.0			73.1	
Approach LOS		C			D			C			E	
Intersection Summary												
HCM Average Control Delay			34.4			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.95									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			94.5%			ICU Level of Service		F				
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	2228		1118	2228		1118	2172		1118	2201	
Flt Permitted	0.07	1.00		0.07	1.00		0.17	1.00		0.16	1.00	
Satd. Flow (perm)	83	2228		83	2228		203	2172		188	2201	
Volume (vph)	51	2115	48	70	1890	42	79	841	197	57	625	72
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	53	2203	50	73	1969	44	82	876	205	59	651	75
RTOR Reduction (vph)	0	2	0	0	2	0	0	7	0	0	10	0
Lane Group Flow (vph)	53	2251	0	73	2011	0	82	1075	0	59	716	0
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	56.5	56.5		56.5	56.5		24.8	24.8		24.8	24.8	
Effective Green, g (s)	57.0	57.0		57.0	57.0		25.0	25.0		25.0	25.0	
Actuated g/C Ratio	0.63	0.63		0.63	0.63		0.28	0.28		0.28	0.28	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	53	1411		53	1411		56	603		52	611	
v/s Ratio Prot	c1.01		0.90		0.90		c0.49		c0.49		0.33	
v/s Ratio Perm	0.64		0.88		0.88		0.40		0.40		0.31	
v/c Ratio	1.00	1.60		1.38	1.43		1.46	1.78		1.13	1.17	
Uniform Delay, d1	16.5	16.5		16.5	16.5		32.5	32.5		32.5	32.5	
Progression Factor	1.00	1.00		0.63	0.63		0.52	0.51		1.00	1.00	
Incremental Delay, d2	123.6	271.3		180.3	191.8		217.7	352.5		166.6	93.8	
Delay (s)	140.1	287.8		190.7	202.1		234.6	369.1		199.1	126.3	
Level of Service	F	F		F	F		F	F		F	F	
Approach Delay (s)	284.4		201.7		201.7		359.6		359.6		131.8	
Approach LOS	F		F		F		F		F		F	

Intersection Summary

HCM Average Control Delay	252.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	156.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00		0.95	
Frt	1.00	0.98		1.00	1.00		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1118	2202		1118	2226		1118	2235	1000		2189	
Flt Permitted	0.18	1.00		0.08	1.00		0.16	1.00	1.00		1.00	
Satd. Flow (perm)	214	2202		90	2226		190	2235	1000		2189	
Volume (vph)	127	1605	180	70	1038	30	82	932	192	0	690	109
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	134	1689	189	74	1093	32	86	981	202	0	726	115
RTOR Reduction (vph)	0	9	0	0	2	0	0	0	13	0	14	0
Lane Group Flow (vph)	134	1869	0	74	1123	0	86	981	189	0	827	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			8		4
Permitted Phases	2			6			8			8		
Actuated Green, G (s)	51.5	51.5		51.5	51.5		29.8	29.8	29.8		29.8	
Effective Green, g (s)	52.0	52.0		52.0	52.0		30.0	30.0	30.0		30.0	
Actuated g/C Ratio	0.58	0.58		0.58	0.58		0.33	0.33	0.33		0.33	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2	4.2		4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	124	1272		52	1286		63	745	333		730	
v/s Ratio Prot	c0.85			0.50			0.44			0.38		
v/s Ratio Perm	0.63			0.82			c0.45			0.19		
v/c Ratio	1.08	1.47		1.42	0.87		1.37	1.32	0.57		1.13	
Uniform Delay, d1	19.0	19.0		19.0	16.2		30.0	30.0	24.7		30.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		0.49	
Incremental Delay, d2	104.1	215.4		271.9	8.4		238.0	152.0	6.8		61.6	
Delay (s)	123.1	234.4		290.9	24.6		268.0	182.0	31.5		76.2	
Level of Service	F	F		F	C		F	F	C		E	
Approach Delay (s)	227.0			41.0			163.8			76.2		
Approach LOS	F			D			F			E		
Intersection Summary												
HCM Average Control Delay	146.2			HCM Level of Service			F					
HCM Volume to Capacity ratio	1.43											
Actuated Cycle Length (s)	90.0			Sum of lost time (s)			8.0					
Intersection Capacity Utilization	143.9%			ICU Level of Service			H					
Analysis Period (min)	15											
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						0.95			0.95	
Frbp, ped/bikes		1.00						0.97			1.00	
Flpb, ped/bikes		0.99						1.00			1.00	
Frt		0.97						0.98			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		2999						2995			3144	
Flt Permitted		0.99						1.00			0.64	
Satd. Flow (perm)		2999						2995			2021	
Volume (vph)	159	486	171	0	0	0	0	930	173	97	869	0
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	185	565	199	0	0	0	0	1081	201	113	1010	0
RTOR Reduction (vph)	0	40	0	0	0	0	0	26	0	0	0	0
Lane Group Flow (vph)	0	909	0	0	0	0	0	1256	0	0	1123	0
Conf. Peds. (#/hr)	60								223	223		
Conf. Bikes (#/hr)			1							3		
Turn Type	Perm						Perm					
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		21.0						33.0			33.0	
Effective Green, g (s)		20.0						32.0			32.0	
Actuated g/C Ratio		0.33						0.53			0.53	
Clearance Time (s)		3.0						3.0			3.0	
Vehicle Extension (s)		3.0						3.0			3.0	
Lane Grp Cap (vph)		1000						1597			1078	
v/s Ratio Prot								0.42				
v/s Ratio Perm		0.30									c0.56	
v/c Ratio		0.91						0.79			1.04	
Uniform Delay, d1		19.1						11.3			14.0	
Progression Factor		1.43						1.00			1.00	
Incremental Delay, d2		6.8						4.0			38.9	
Delay (s)		34.2						15.2			52.9	
Level of Service		C						B			D	
Approach Delay (s)		34.2			0.0			15.2			52.9	
Approach LOS		C			A			B			D	
Intersection Summary												
HCM Average Control Delay			33.2					HCM Level of Service			C	
HCM Volume to Capacity ratio			0.99									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)		8.0		
Intersection Capacity Utilization			102.4%					ICU Level of Service		G		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑	↗		↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00		0.95	1.00
Frbp, ped/bikes	1.00	0.97		1.00	0.98		1.00	1.00	0.80		1.00	0.84
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1583	4354		1583	4394		1583	3167	1133		3167	1189
Flt Permitted	0.09	1.00		0.09	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	155	4354		153	4394		1583	3167	1133		3167	1189
Volume (vph)	133	2071	211	198	1636	137	294	995	105	0	963	385
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	141	2203	224	211	1740	146	313	1059	112	0	1024	410
RTOR Reduction (vph)	0	12	0	0	10	0	0	0	72	0	0	123
Lane Group Flow (vph)	141	2415	0	211	1876	0	313	1059	40	0	1024	287
Conf. Peds. (#/hr)	216		278	278		216	112		142	142		112
Conf. Bikes (#/hr)			9			5			5			3
Turn Type	pm+pt			pm+pt			Prot		Perm			Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases	2			6				8				4
Actuated Green, G (s)	52.3	44.0		53.7	44.7		9.9	35.9	35.9		22.9	22.9
Effective Green, g (s)	50.3	43.0		51.7	43.7		9.0	35.0	35.0		22.0	22.0
Actuated g/C Ratio	0.51	0.44		0.53	0.45		0.09	0.36	0.36		0.22	0.22
Clearance Time (s)	3.0	3.0		3.0	3.0		3.1	3.1	3.1		3.1	3.1
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	186	1910		197	1959		145	1131	405		711	267
v/s Ratio Prot	0.06	c0.55		c0.09	0.43		c0.20	0.33			c0.32	
v/s Ratio Perm	0.33			0.48					0.04			0.24
v/c Ratio	0.76	1.26		1.07	0.96		2.16	0.94	0.10		1.44	1.08
Uniform Delay, d1	18.9	27.5		47.2	26.3		44.5	30.4	21.0		38.0	38.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	14.5	123.2		84.3	12.5		543.6	15.3	0.5		206.1	76.9
Delay (s)	33.3	150.7		131.4	38.8		588.1	45.7	21.5		244.1	114.9
Level of Service	C	F		F	D		F	D	C		F	F
Approach Delay (s)		144.3			48.1			158.3			207.1	
Approach LOS		F			D			F			F	

Intersection Summary			
HCM Average Control Delay	132.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	98.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	124.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕		↕	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.96			0.97		1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3011			3036		1583	3139		1583	3148	
Flt Permitted		0.83			0.72		0.09	1.00		0.09	1.00	
Satd. Flow (perm)		2520			2218		146	3139		148	3148	
Volume (vph)	62	230	114	81	202	72	84	1229	75	68	1197	50
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	68	253	125	89	222	79	92	1351	82	75	1315	55
RTOR Reduction (vph)	0	45	0	0	25	0	0	4	0	0	3	0
Lane Group Flow (vph)	0	401	0	0	365	0	92	1429	0	75	1367	0
Turn Type		Perm		Perm		pm+pt		pm+pt		pm+pt		
Protected Phases		4		8		5		2		1		6
Permitted Phases		4		8		2				6		
Actuated Green, G (s)		29.0		29.0		52.5		46.6		51.5		46.1
Effective Green, g (s)		28.0		28.0		50.5		45.6		49.5		45.1
Actuated g/C Ratio		0.31		0.31		0.56		0.51		0.55		0.50
Clearance Time (s)		3.0		3.0		3.0		3.0		3.0		3.0
Vehicle Extension (s)		3.0		3.0		2.0		5.0		2.0		5.0
Lane Grp Cap (vph)		784		690		160		1590		152		1577
v/s Ratio Prot						c0.03		c0.46		0.02		0.43
v/s Ratio Perm		0.16		c0.16		0.29				0.25		
v/c Ratio		0.51		0.53		0.57		0.90		0.49		0.87
Uniform Delay, d1		25.4		25.6		14.5		20.1		14.8		19.8
Progression Factor		1.00		1.00		1.00		1.00		1.00		1.00
Incremental Delay, d2		2.4		0.7		3.1		8.5		0.9		6.7
Delay (s)		27.8		26.3		17.6		28.6		15.7		26.5
Level of Service		C		C		B		C		B		C
Approach Delay (s)		27.8		26.3				27.9				25.9
Approach LOS		C		C				C				C

Intersection Summary

HCM Average Control Delay	27.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑			↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95			0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.96			0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1583	4533		1583	4550		1583	3030			3084	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1583	4533		1583	4550		1583	3030			3084	
Volume (vph)	63	2933	77	31	2333	0	9	314	127	0	609	128
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	66	3055	80	32	2430	0	9	327	132	0	634	133
RTOR Reduction (vph)	0	3	0	0	0	0	0	48	0	0	20	0
Lane Group Flow (vph)	66	3132	0	32	2430	0	9	411	0	0	747	0
Turn Type	Prot		Prot		Split							
Protected Phases	1!	2!		5!	6!		8	8			7	
Permitted Phases												
Actuated Green, G (s)	7.4	31.7		5.1	33.0		13.9	13.9			22.0	
Effective Green, g (s)	6.9	31.2		5.1	33.0		13.9	13.9			22.0	
Actuated g/C Ratio	0.08	0.35		0.06	0.37		0.15	0.15			0.24	
Clearance Time (s)	3.5	3.5		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	121	1571		90	1668		244	468			754	
v/s Ratio Prot	c0.04	c0.69		0.02	0.53		0.01	c0.14			c0.24	
v/s Ratio Perm												
v/c Ratio	0.55	1.99		0.36	1.46		0.04	0.88			0.99	
Uniform Delay, d1	40.0	29.4		40.9	28.5		32.4	37.2			33.9	
Progression Factor	1.25	0.51		1.54	0.31		1.00	1.00			1.00	
Incremental Delay, d2	0.5	447.5		0.2	205.9		0.1	16.8			30.7	
Delay (s)	50.5	462.5		63.1	214.8		32.4	54.0			64.6	
Level of Service	D	F		E	F		C	D			E	
Approach Delay (s)		454.0			212.8			53.6			64.6	
Approach LOS		F			F			D			E	

Intersection Summary

HCM Average Control Delay	297.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

! Phase conflict between lane groups.
 c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↓		↑	↑↑↓		↑	↑↓		↑	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt		0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4524		1583	4518		1583	3161		1583	3167	
Flt Permitted		1.00		0.95	1.00		0.18	1.00		0.18	1.00	
Satd. Flow (perm)		4524		1583	4518		303	3161		303	3167	
Volume (vph)	0	2942	118	15	2216	108	106	822	10	39	933	0
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	3033	122	15	2285	111	109	847	10	40	962	0
RTOR Reduction (vph)	0	5	0	0	5	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	3150	0	15	2391	0	109	856	0	40	962	0
Turn Type				Prot			Perm			Perm		
Protected Phases		2!		5!	6		7		7		7	
Permitted Phases							7			7		
Actuated Green, G (s)		31.7		5.1	33.0		22.0	22.0		22.0	22.0	
Effective Green, g (s)		31.2		5.1	33.0		22.0	22.0		22.0	22.0	
Actuated g/C Ratio		0.35		0.06	0.37		0.24	0.24		0.24	0.24	
Clearance Time (s)		3.5		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1568		90	1657		74	773		74	774	
v/s Ratio Prot		c0.70		c0.01	0.53			0.27			0.30	
v/s Ratio Perm							c0.36			0.13		
v/c Ratio		2.01		0.17	1.44		1.47	1.11		0.54	1.24	
Uniform Delay, d1		29.4		40.4	28.5		34.0	34.0		29.6	34.0	
Progression Factor		0.29		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		454.3		0.9	202.8		272.1	66.0		25.5	120.1	
Delay (s)		462.8		41.3	231.3		306.1	100.0		55.1	154.1	
Level of Service		F		D	F		F	F		E	F	
Approach Delay (s)		462.8			230.1			123.3			150.2	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	303.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	29.9
Intersection Capacity Utilization	111.9%	ICU Level of Service	H
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕		↕	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0		4.0	4.0	
Lane Util. Factor		0.95						0.95		1.00	0.95	
Frbp, ped/bikes		0.99						0.94		1.00	1.00	
Flpb, ped/bikes		0.94						1.00		0.83	1.00	
Frt		0.99						0.97		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		2886						2912		1312	3167	
Flt Permitted		0.99						1.00		0.44	1.00	
Satd. Flow (perm)		2886						2912		602	3167	
Volume (vph)	163	631	31	0	0	0	0	333	67	89	629	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	172	664	33	0	0	0	0	351	71	94	662	0
RTOR Reduction (vph)	0	4	0	0	0	0	0	28	0	0	0	0
Lane Group Flow (vph)	0	865	0	0	0	0	0	394	0	94	662	0
Confl. Peds. (#/hr)	173		248	248			173	221		404	404	221
Confl. Bikes (#/hr)			3				2			1		4
Turn Type		Perm									Perm	
Protected Phases		2						4			4	
Permitted Phases		2									4	
Actuated Green, G (s)		17.0						17.0		17.0	17.0	
Effective Green, g (s)		16.0						16.0		16.0	16.0	
Actuated g/C Ratio		0.27						0.27		0.27	0.27	
Clearance Time (s)		3.0						3.0		3.0	3.0	
Vehicle Extension (s)		5.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		770						777		161	845	
v/s Ratio Prot								0.14			c0.21	
v/s Ratio Perm		0.30								0.16		
v/c Ratio		1.12						0.51		0.58	0.78	
Uniform Delay, d1		22.0						18.7		19.1	20.4	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		71.7						2.4		14.6	7.2	
Delay (s)		93.7						21.0		33.7	27.6	
Level of Service		F						C		C	C	
Approach Delay (s)		93.7			0.0			21.0			28.3	
Approach LOS		F			A			C			C	
Intersection Summary												
HCM Average Control Delay			54.6					HCM Level of Service			D	
HCM Volume to Capacity ratio			0.95									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)		28.0		
Intersection Capacity Utilization			82.1%					ICU Level of Service		E		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕↕↕			↕↕↕		↔	↔		↔	↕	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91			0.91		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00			0.98		1.00	0.87		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			1.00		0.86	1.00		1.00	1.00	1.00
Frt	1.00	1.00			0.99		1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4521			4385		1368	1353		1583	1667	1102
Flt Permitted	0.08	1.00			1.00		0.56	1.00		0.95	1.00	1.00
Satd. Flow (perm)	141	4521			4385		812	1353		1583	1667	1102
Volume (vph)	100	2204	29	0	2201	190	111	97	82	164	319	146
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	102	2249	30	0	2246	194	113	99	84	167	326	149
RTOR Reduction (vph)	0	1	0	0	11	0	0	0	0	0	0	0
Lane Group Flow (vph)	102	2278	0	0	2429	0	113	183	0	167	326	149
Confl. Peds. (#/hr)	244		131	131		244	166		211	211		166
Confl. Bikes (#/hr)			3			5			2			3
Turn Type	Perm			Perm			Prot			custom		
Protected Phases	2			6			8			7		
Permitted Phases	2						8			4 4		
Actuated Green, G (s)	48.2	48.2			48.2		21.0	21.0		11.8	35.8	35.8
Effective Green, g (s)	47.2	47.2			47.2		20.0	20.0		10.8	34.8	34.8
Actuated g/C Ratio	0.52	0.52			0.52		0.22	0.22		0.12	0.39	0.39
Clearance Time (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Vehicle Extension (s)	5.0	5.0			5.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	2371			2300		180	301		190	645	426
v/s Ratio Prot		0.50			0.55			0.14		c0.11		
v/s Ratio Perm	c0.72						c0.14				0.20	0.14
v/c Ratio	1.38	0.96			1.06		0.63	0.61		0.88	0.51	0.35
Uniform Delay, d1	21.4	20.5			21.4		31.6	31.5		39.0	21.0	19.6
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	234.6	11.3			35.7		15.4	8.8		33.7	2.8	2.3
Delay (s)	256.0	31.8			57.1		47.1	40.3		72.6	23.9	21.8
Level of Service	F	C			E		D	D		E	C	C
Approach Delay (s)		41.4			57.1			42.9			36.1	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM Average Control Delay	47.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR2
Lane Configurations		↔	↔↔↔		↔	↔↔↔			↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0			4.0
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frbp, ped/bikes		1.00	0.98		1.00	0.97			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.98			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1583	4435		1583	4319			1442
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1583	4435		1583	4319			1442
Volume (vph)	220	584	2165	121	587	1443	110	69	309
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	227	602	2232	125	605	1488	113	71	319
RTOR Reduction (vph)	0	0	6	0	0	0	0	0	281
Lane Group Flow (vph)	0	829	2351	0	605	1672	0	0	38
Confl. Peds. (#/hr)	99	154		137	137		99	154	155
Confl. Bikes (#/hr)				6			7	10	2
Turn Type	Prot	Prot			Prot				custom
Protected Phases	1	1	2		8	6			1
Permitted Phases									
Actuated Green, G (s)		13.0	52.0		26.0	81.0			13.0
Effective Green, g (s)		12.0	51.0		25.0	80.0			12.0
Actuated g/C Ratio		0.12	0.51		0.25	0.80			0.12
Clearance Time (s)		3.0	3.0		3.0	3.0			3.0
Vehicle Extension (s)		2.5	5.0		3.0	5.0			2.5
Lane Grp Cap (vph)		190	2262		396	3455			173
v/s Ratio Prot		c0.52	c0.53		c0.38	0.39			0.03
v/s Ratio Perm									
v/c Ratio		4.36	1.04		1.53	0.48			0.22
Uniform Delay, d1		44.0	24.5		37.5	3.3			39.8
Progression Factor		1.17	1.53		1.00	1.00			1.00
Incremental Delay, d2		1514.5	19.5		250.0	0.5			0.5
Delay (s)		1566.1	56.9		287.5	3.8			40.2
Level of Service		F	E		F	A			D
Approach Delay (s)			449.6			79.1			
Approach LOS			F			E			
Intersection Summary									
HCM Average Control Delay			281.1			HCM Level of Service			F
HCM Volume to Capacity ratio			1.63						
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			12.0
Intersection Capacity Utilization			93.1%			ICU Level of Service			F
Analysis Period (min)			15						
c Critical Lane Group									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↖↗↘		↗	↖↗↘			↕	↗		↖↗↘	↗
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	0.86	0.86		1.00	0.91			0.95	1.00		0.86	0.86
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.98	0.85
Flt Protected	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	961	3000		1118	3209			2235	1000		2988	860
Flt Permitted	0.95	0.70		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	961	2106		1118	3209			2235	1000		2988	860
Volume (vph)	781	1526	24	216	1803	10	0	1114	583	0	1349	924
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	888	1734	27	245	2049	11	0	1266	662	0	1533	1050
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	214	0	13	325
Lane Group Flow (vph)	444	2204	0	245	2059	0	0	1266	449	0	1698	547
Turn Type	Prot		Prot				Perm				Over	
Protected Phases	7	4		3	8			2			6	7
Permitted Phases									2			
Actuated Green, G (s)	15.9	41.4		14.9	40.4			29.4	29.4		29.4	15.9
Effective Green, g (s)	17.0	42.0		16.0	41.0			30.0	30.0		30.0	17.0
Actuated g/C Ratio	0.17	0.42		0.16	0.41			0.30	0.30		0.30	0.17
Clearance Time (s)	5.1	4.6		5.1	4.6			4.6	4.6		4.6	5.1
Vehicle Extension (s)	3.0	3.0		5.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	163	1037		179	1316			671	300		896	146
v/s Ratio Prot	0.46	0.36		0.22	c0.64			0.57			c0.57	c0.64
v/s Ratio Perm		c0.53							0.45			
v/c Ratio	2.72	2.13		1.37	1.56			1.89	1.50		1.89	3.75
Uniform Delay, d1	41.5	29.0		42.0	29.5			35.0	35.0		35.0	41.5
Progression Factor	1.00	1.00		1.16	0.59			1.00	1.00		1.00	1.00
Incremental Delay, d2	792.8	509.6		176.7	255.4			404.7	239.6		406.8	1254.0
Delay (s)	834.3	538.6		225.5	272.7			439.7	274.6		441.8	1295.5
Level of Service	F	F		F	F			F	F		F	F
Approach Delay (s)		588.2			267.7			383.0			730.0	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	507.0	HCM Level of Service	F
HCM Volume to Capacity ratio	2.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	172.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↑	↑↑↑		↑	↑↑	↑	↑	↑↑	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frt		1.00		1.00	1.00		1.00	1.00	0.85	1.00	0.93	
Flt Protected		0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3177		1118	3205		1118	2235	1000	1118	2087	
Flt Permitted		0.67		0.95	1.00		0.13	1.00	1.00	0.13	1.00	
Satd. Flow (perm)		2157		1118	3205		157	2235	1000	157	2087	
Volume (vph)	479	1833	10	351	1351	21	10	818	334	28	621	491
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	489	1870	10	358	1379	21	10	835	341	29	634	501
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	209	0	143	0
Lane Group Flow (vph)	0	2368	0	358	1398	0	10	835	132	29	992	0
Turn Type		Prot		Prot		Perm		Perm	Perm			
Protected Phases		7	4	3	8			2			6	
Permitted Phases							2		2		6	
Actuated Green, G (s)		41.4		14.9	40.4		29.4	29.4	29.4		29.4	
Effective Green, g (s)		42.0		16.0	41.0		30.0	30.0	30.0		30.0	
Actuated g/C Ratio		0.42		0.16	0.41		0.30	0.30	0.30		0.30	
Clearance Time (s)		4.6		5.1	4.6		4.6	4.6	4.6		4.6	
Vehicle Extension (s)		3.0		5.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		1079		179	1314		47	671	300		47	626
v/s Ratio Prot		c0.37		c0.32	0.44			0.37				c0.48
v/s Ratio Perm		c0.55					0.06		0.13		0.18	
v/c Ratio		2.20		2.00	1.06		0.21	1.24	0.44		0.62	1.58
Uniform Delay, d1		29.0		42.0	29.5		26.2	35.0	28.2		30.1	35.0
Progression Factor		0.80		0.93	1.44		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2		538.0		468.0	43.0		10.1	122.3	4.6		48.2	270.8
Delay (s)		561.3		507.1	85.6		36.2	157.3	32.8		78.3	305.8
Level of Service		F		F	F		D	F	C		E	F
Approach Delay (s)		561.3			171.4			120.5				300.1
Approach LOS		F			F			F				F

Intersection Summary

HCM Average Control Delay	327.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.93		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	176.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.86	0.97	0.88
Frbp, ped/bikes		1.00	0.94	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)		4047	936	2168	4047	2168	1760
Flt Permitted		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)		4047	936	2168	4047	2168	1760
Volume (vph)	0	2253	263	533	1668	307	1160
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	2323	271	549	1720	316	1196
RTOR Reduction (vph)	0	0	66	0	0	0	680
Lane Group Flow (vph)	0	2323	205	549	1720	316	516
Conf. Peds. (#/hr)			60	60		1	4
Conf. Bikes (#/hr)			23				4
Turn Type	Prot		pm+ov	Prot			Over
Protected Phases	1	6	4	3	2 3	4	3
Permitted Phases			6				
Actuated Green, G (s)		50.9	73.1	31.0	87.9	22.2	31.0
Effective Green, g (s)		52.9	78.0	30.0	86.9	25.1	30.0
Actuated g/C Ratio		0.44	0.65	0.25	0.72	0.21	0.25
Clearance Time (s)		6.0	6.9	3.0		6.9	3.0
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1784	640	542	2931	453	440
v/s Ratio Prot		c0.57	0.07	0.25	0.42	c0.15	c0.29
v/s Ratio Perm			0.15				
v/c Ratio		1.30	0.32	1.01	0.59	0.70	1.17
Uniform Delay, d1		33.5	9.3	45.0	7.9	43.9	45.0
Progression Factor		0.91	3.12	1.00	1.00	1.00	1.00
Incremental Delay, d2		137.3	0.1	41.9	0.3	4.6	99.2
Delay (s)		168.0	29.0	86.9	8.2	48.6	144.2
Level of Service		F	C	F	A	D	F
Approach Delay (s)		153.5			27.3	124.2	
Approach LOS		F			C	F	
Intersection Summary							
HCM Average Control Delay			101.6		HCM Level of Service		F
HCM Volume to Capacity ratio			1.13				
Actuated Cycle Length (s)			120.0		Sum of lost time (s)		12.0
Intersection Capacity Utilization			123.0%		ICU Level of Service		H
Analysis Period (min)			15				
c Critical Lane Group							



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘		↖		↖	↑↑↑		↖	↑↑	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0				4.0	4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	0.88				1.00	0.91			0.95	1.00
Frt	1.00	1.00	0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1504	1504	2493				1583	4550			3167	1417
Flt Permitted	0.95	0.95	1.00				0.10	1.00			1.00	1.00
Satd. Flow (perm)	1504	1504	2493				159	4550			3167	1417
Volume (vph)	589	0	616	0	0	0	176	455	0	0	1130	208
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	669	0	700	0	0	0	200	517	0	0	1284	236
RTOR Reduction (vph)	0	0	583	0	0	0	0	0	0	0	0	164
Lane Group Flow (vph)	335	334	117	0	0	0	200	517	0	0	1284	72
Turn Type	Split	custom					pm+pt			Perm		Over
Protected Phases	4	4	7 1		3		5	2			6	4
Permitted Phases							2			6		
Actuated Green, G (s)	16.5	16.5	14.4				45.7	40.7			40.7	16.5
Effective Green, g (s)	17.1	17.1	15.0				46.9	41.9			41.9	17.1
Actuated g/C Ratio	0.19	0.19	0.17				0.52	0.47			0.47	0.19
Clearance Time (s)	4.6	4.6					4.0	5.2			5.2	4.6
Vehicle Extension (s)	3.0	3.0					3.0	3.2			3.4	3.0
Lane Grp Cap (vph)	286	286	416				162	2118			1474	269
v/s Ratio Prot	c0.22	0.22	c0.05				c0.07	0.11			0.41	0.05
v/s Ratio Perm							c0.57					
v/c Ratio	1.17	1.17	0.28				1.23	0.24			0.87	0.27
Uniform Delay, d1	36.5	36.5	32.8				17.8	14.5			21.6	31.1
Progression Factor	0.99	0.99	5.20				2.25	1.00			1.00	1.00
Incremental Delay, d2	106.1	104.8	0.3				134.3	0.2			7.3	2.4
Delay (s)	142.2	140.9	170.8				174.3	14.7			28.9	33.6
Level of Service	F	F	F				F	B			C	C
Approach Delay (s)		156.5			0.0			59.2			29.7	
Approach LOS		F			A			E			C	

Intersection Summary

HCM Average Control Delay	83.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑		↑↑	↑↑↑		↑↑	↑↑	↑↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.86		0.97	0.91		0.97	0.95	0.88
Frt		1.00	0.85		0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		4550	1417		5632		3072	4494		3072	3167	2493
Flt Permitted		1.00	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		4550	1417		5632		3072	4494		3072	3167	2493
Volume (vph)	0	2873	519	0	2514	335	5	757	68	331	515	270
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	2962	535	0	2592	345	5	780	70	341	531	278
RTOR Reduction (vph)	0	0	58	0	27	0	0	1	0	0	0	184
Lane Group Flow (vph)	0	2962	477	0	2910	0	5	849	0	341	531	94
Turn Type		pm+ov					Prot			Prot		Perm
Protected Phases		6	3		2		3	8		7	4	
Permitted Phases		6										4
Actuated Green, G (s)		38.5	46.2		38.5		7.7	27.7		9.0	29.0	29.0
Effective Green, g (s)		40.0	47.7		40.0		7.7	29.0		9.0	30.3	30.3
Actuated g/C Ratio		0.44	0.53		0.44		0.09	0.32		0.10	0.34	0.34
Clearance Time (s)		5.5	4.0		5.5		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)		4.9	3.0		5.2		3.0	5.1		3.0	5.1	5.1
Lane Grp Cap (vph)		2022	814		2503		263	1448		307	1066	839
v/s Ratio Prot		c0.65	0.05		0.52		0.00	c0.19		c0.11	0.17	
v/s Ratio Perm			0.29									0.04
v/c Ratio		1.46	0.59		1.16		0.02	0.59		1.11	0.50	0.11
Uniform Delay, d1		25.0	14.4		25.0		37.7	25.5		40.5	23.8	20.6
Progression Factor		1.00	1.00		0.93		1.00	1.00		1.26	1.04	2.88
Incremental Delay, d2		212.0	1.1		73.7		0.0	1.7		72.4	0.4	0.1
Delay (s)		237.0	15.5		96.9		37.7	27.2		123.5	25.1	59.4
Level of Service		F	B		F		D	C		F	C	E
Approach Delay (s)		203.1			96.9		27.3			62.6		
Approach LOS		F			F		C			E		

Intersection Summary

HCM Average Control Delay	129.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	⬇	↑↑↑	↗	↘↘	↑↑↑	↘↘↘	↗↗
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.86	1.00	0.97	0.91	0.94	0.88
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1118	4047	1000	2168	3212	3152	1760
Flt Permitted	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1118	4047	1000	2168	3212	3152	1760
Volume (vph)	16	1855	458	291	1676	878	652
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	16	1874	463	294	1693	887	659
RTOR Reduction (vph)	0	0	281	0	0	0	521
Lane Group Flow (vph)	16	1874	182	294	1693	887	138
Conf. Peds. (#/hr)			86	86		1	235
Conf. Bikes (#/hr)			19				3
Turn Type	Prot		Over	Prot			Over
Protected Phases	1	6	8	5	2	8	5
Permitted Phases							
Actuated Green, G (s)	2.3	47.2	30.1	25.1	69.0	30.1	25.1
Effective Green, g (s)	3.3	49.9	33.0	25.1	71.7	33.0	25.1
Actuated g/C Ratio	0.03	0.42	0.28	0.21	0.60	0.28	0.21
Clearance Time (s)	5.0	6.7	6.9	4.0	6.7	6.9	4.0
Vehicle Extension (s)	3.0	5.0	3.0	3.0	5.0	3.0	3.0
Lane Grp Cap (vph)	31	1683	275	453	1919	867	368
v/s Ratio Prot	0.01	c0.46	0.18	0.14	c0.53	c0.28	0.08
v/s Ratio Perm							
v/c Ratio	0.52	1.11	0.66	0.65	0.88	1.02	0.37
Uniform Delay, d1	57.6	35.0	38.6	43.4	20.6	43.5	40.7
Progression Factor	0.87	1.55	2.13	0.89	0.73	1.00	1.00
Incremental Delay, d2	1.3	52.0	0.6	2.6	5.1	36.5	0.6
Delay (s)	51.3	106.3	82.7	41.2	20.2	80.0	41.4
Level of Service	D	F	F	D	C	F	D
Approach Delay (s)		101.3			23.3	63.6	
Approach LOS		F			C	E	
Intersection Summary							
HCM Average Control Delay			65.1		HCM Level of Service		E
HCM Volume to Capacity ratio			1.02				
Actuated Cycle Length (s)			120.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization			93.5%		ICU Level of Service		F
Analysis Period (min)			15				
c Critical Lane Group							



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↘↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	0.97	0.91	0.91
Frbp, ped/bikes	1.00	1.00	0.89	1.00	1.00	0.86	1.00	1.00	0.87	1.00	0.91	0.91
Flpb, ped/bikes	0.99	1.00	1.00	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94	0.94
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1568	3167	1260	1519	3167	1212	3072	4550	1231	3072	3920	3920
Flt Permitted	0.27	1.00	1.00	0.37	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	451	3167	1260	585	3167	1212	3072	4550	1231	3072	3920	3920
Volume (vph)	52	679	535	288	615	439	265	685	154	220	770	450
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	738	582	313	668	477	288	745	167	239	837	489
RTOR Reduction (vph)	0	0	1	0	0	168	0	0	58	0	115	0
Lane Group Flow (vph)	57	738	581	313	668	309	288	745	109	239	1211	0
Conf. Peds. (#/hr)	138		119	119		138	179		101	101		179
Conf. Bikes (#/hr)			4			5			4			3
Turn Type	pm+pt		pm+ov	Perm		Perm	Prot		Perm	Prot		
Protected Phases	1	6	3		2		3	8		7	4	
Permitted Phases	6		6	2		2			8			
Actuated Green, G (s)	43.4	43.4	49.4	35.5	35.5	35.5	6.0	20.8	20.8	11.8	26.6	
Effective Green, g (s)	44.9	44.9	50.9	37.0	37.0	37.0	6.0	21.3	21.3	11.8	27.1	
Actuated g/C Ratio	0.50	0.50	0.57	0.41	0.41	0.41	0.07	0.24	0.24	0.13	0.30	
Clearance Time (s)	3.5	5.5	4.0	5.5	5.5	5.5	4.0	4.5	4.5	4.0	4.5	
Vehicle Extension (s)	3.0	4.0	2.0	4.0	4.0	4.0	2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	273	1580	769	241	1302	498	205	1077	291	403	1180	
v/s Ratio Prot	0.01	0.23	c0.05		0.21		c0.09	0.16		0.08	c0.31	
v/s Ratio Perm	0.10		0.41	c0.53		0.26			0.09			
v/c Ratio	0.21	0.47	0.76	1.30	0.51	0.62	1.40	0.69	0.37	0.59	1.10dr	
Uniform Delay, d1	12.7	14.7	14.8	26.5	19.8	21.0	42.0	31.4	28.8	36.8	31.4	
Progression Factor	0.94	0.95	0.94	1.08	1.10	1.24	1.05	1.13	1.16	1.00	1.00	
Incremental Delay, d2	0.4	0.3	3.7	161.2	0.5	2.7	208.4	3.6	3.6	1.6	33.2	
Delay (s)	12.4	14.3	17.7	189.9	22.2	28.6	252.7	39.1	37.0	38.4	64.6	
Level of Service	B	B	B	F	C	C	F	D	D	D	E	
Approach Delay (s)		15.7			60.3			90.1			60.6	
Approach LOS		B			E			F			E	

Intersection Summary

HCM Average Control Delay	55.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	102.0%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↘	↑↑↑	↗	↘	↑↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)					4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor					1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frt					1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected					0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)					1583	1417	1583	4550	1417	1583	4550	
Flt Permitted					0.76	1.00	0.09	1.00	1.00	0.34	1.00	
Satd. Flow (perm)					1262	1417	157	4550	1417	560	4550	
Volume (vph)	0	0	0	125	0	173	1	730	95	123	1693	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	136	0	188	1	793	103	134	1840	0
RTOR Reduction (vph)	0	0	0	0	0	154	0	0	28	0	0	0
Lane Group Flow (vph)	0	0	0	0	136	34	1	793	75	134	1840	0
Turn Type	Perm			Perm			Perm	Perm	Perm		Perm	
Protected Phases	4			4			4		2		2	
Permitted Phases	4			4			2		2		2	
Actuated Green, G (s)				15.5			15.5	64.5	64.5	64.5	64.5	64.5
Effective Green, g (s)				16.5			16.5	65.5	65.5	65.5	65.5	65.5
Actuated g/C Ratio				0.18			0.18	0.73	0.73	0.73	0.73	0.73
Clearance Time (s)				5.0			5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)				3.0			3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)				231			260	114	3311	1031	408	3311
v/s Ratio Prot							0.17				c0.40	
v/s Ratio Perm				c0.11			0.02	0.01	0.05		0.24	
v/c Ratio				0.59			0.13	0.01	0.24	0.07	0.33	0.56
Uniform Delay, d1				33.6			30.8	3.4	4.0	3.5	4.4	5.6
Progression Factor				1.00			1.00	2.21	1.63	3.75	1.02	1.09
Incremental Delay, d2				3.8			0.2	0.1	0.2	0.1	1.0	0.3
Delay (s)				37.4			31.0	7.6	6.8	13.3	5.5	6.4
Level of Service				D			C	A	A	B	A	A
Approach Delay (s)	0.0			33.7			7.5				6.3	
Approach LOS	A			C			A				A	

Intersection Summary

HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕	↗	↖	↕↕↕		↖↖	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95	0.95	1.00	0.91		0.97	0.91	
Frt		0.96			0.96	0.85	1.00	0.97		1.00	1.00	
Flt Protected		0.97			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2961			1501	1346	1583	4393		3072	4541	
Flt Permitted		0.80			0.90	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2424			1366	1346	1583	4393		3072	4541	
Volume (vph)	84	31	42	10	16	69	11	684	204	132	1641	22
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	86	32	43	10	16	70	11	698	208	135	1674	22
RTOR Reduction (vph)	0	36	0	0	8	24	0	31	0	0	1	0
Lane Group Flow (vph)	0	125	0	0	27	37	11	875	0	135	1695	0
Turn Type		Perm		Perm		pm+ov	Prot			Prot		
Protected Phases		8		4	4	5	1	6		5	2	
Permitted Phases	8			4		4						
Actuated Green, G (s)		12.6			12.6	20.7	1.4	55.1		8.1	61.8	
Effective Green, g (s)		14.1			14.1	22.2	1.4	55.8		8.1	62.5	
Actuated g/C Ratio		0.16			0.16	0.25	0.02	0.62		0.09	0.69	
Clearance Time (s)		5.5			5.5	4.0	4.0	4.7		4.0	4.7	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		380			214	392	25	2724		276	3153	
v/s Ratio Prot						0.01	0.01	0.20		c0.04	c0.37	
v/s Ratio Perm		c0.05			0.02	0.02						
v/c Ratio		0.33			0.13	0.09	0.44	0.32		0.49	0.54	
Uniform Delay, d1		33.7			32.7	26.1	43.9	8.1		39.0	6.7	
Progression Factor		1.00			1.00	1.00	0.70	2.01		0.97	0.91	
Incremental Delay, d2		0.5			0.3	0.1	11.3	0.3		1.1	0.6	
Delay (s)		34.2			32.9	26.2	42.2	16.6		39.1	6.7	
Level of Service		C			C	C	D	B		D	A	
Approach Delay (s)		34.2			28.7			16.9			9.1	
Approach LOS		C			C			B			A	

Intersection Summary

HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔		↔	↔		↔	↔↔	↑↑↑		↔	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97		1.00	1.00		1.00	0.97	0.91		1.00	0.91	
Frt	1.00		0.85	1.00		0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95		1.00	0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3072		1417	1583		1417	3072	4520		1583	4544	
Flt Permitted	0.95		1.00	0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3072		1417	1583		1417	3072	4520		1583	4544	
Volume (vph)	128	0	179	17	0	117	19	683	31	82	1519	15
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	141	0	197	19	0	129	21	751	34	90	1669	16
RTOR Reduction (vph)	0	0	163	0	0	91	0	4	0	0	1	0
Lane Group Flow (vph)	141	0	34	19	0	38	21	781	0	90	1684	0
Turn Type	Prot		custom	Prot		custom	Prot			Prot		
Protected Phases	3		3 5	4		1 4	5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	9.1		15.3	13.0		27.3	6.2	40.6		9.4	43.8	
Effective Green, g (s)	10.0		15.4	13.9		26.5	5.4	41.5		8.6	44.7	
Actuated g/C Ratio	0.11		0.17	0.15		0.29	0.06	0.46		0.10	0.50	
Clearance Time (s)	4.9			4.9			3.2	4.9		3.2	4.9	
Vehicle Extension (s)	3.0			3.0			3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	341		242	244		417	184	2084		151	2257	
v/s Ratio Prot	c0.05		0.02	0.01		c0.03	0.01	0.17		c0.06	c0.37	
v/s Ratio Perm												
v/c Ratio	0.41		0.14	0.08		0.09	0.11	0.37		0.60	0.75	
Uniform Delay, d1	37.3		31.7	32.6		23.0	40.0	15.8		39.0	18.1	
Progression Factor	1.00		1.00	1.00		1.00	1.40	0.40		0.83	1.16	
Incremental Delay, d2	0.8		0.3	0.1		0.1	0.0	0.0		5.5	2.0	
Delay (s)	38.1		31.9	32.7		23.1	56.1	6.3		37.9	23.0	
Level of Service	D		C	C		C	E	A		D	C	
Approach Delay (s)		34.5			24.3			7.6			23.7	
Approach LOS		C			C			A			C	
Intersection Summary												
HCM Average Control Delay			20.7									HCM Level of Service C
HCM Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			90.0									Sum of lost time (s) 16.0
Intersection Capacity Utilization			58.9%									ICU Level of Service B
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.91	0.91		0.97	0.88
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3072	4550	4479		3072	2493
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3072	4550	4479		3072	2493
Volume (vph)	510	1802	1735	202	556	1107
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	554	1959	1886	220	604	1203
RTOR Reduction (vph)	0	0	16	0	0	339
Lane Group Flow (vph)	554	1959	2090	0	604	864
Turn Type	Prot					Prot
Protected Phases	5	2 5	6		4	4
Permitted Phases						
Actuated Green, G (s)	12.0	50.5	33.5		29.0	29.0
Effective Green, g (s)	13.0	52.0	35.0		30.0	30.0
Actuated g/C Ratio	0.14	0.58	0.39		0.33	0.33
Clearance Time (s)	5.0		5.5		5.0	5.0
Vehicle Extension (s)	2.0		3.0		3.0	3.0
Lane Grp Cap (vph)	444	2629	1742		1024	831
v/s Ratio Prot	c0.18	0.43	c0.47		0.20	c0.35
v/s Ratio Perm						
v/c Ratio	1.25	0.75	1.20		0.59	1.04
Uniform Delay, d1	38.5	14.1	27.5		24.9	30.0
Progression Factor	1.00	1.00	1.00		1.22	1.42
Incremental Delay, d2	129.1	2.0	95.8		0.6	36.9
Delay (s)	167.6	16.1	123.3		30.9	79.6
Level of Service	F	B	F		C	E
Approach Delay (s)		49.5	123.3		63.3	
Approach LOS		D	F		E	

Intersection Summary

HCM Average Control Delay	77.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↓	↑↑↑	↑↓	↑
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	0.97	0.91
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3212	1000	2168	3212	2168	910
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3212	1000	2168	3212	2168	910
Volume (vph)	2205	345	138	2447	766	268
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	2273	356	142	2523	790	276
RTOR Reduction (vph)	0	141	0	0	0	205
Lane Group Flow (vph)	2273	215	142	2523	790	71
Conf. Peds. (#/hr)		145	145		56	
Conf. Bikes (#/hr)		19				
Turn Type		Over	Prot			Perm
Protected Phases	6	4	5	2	4	
Permitted Phases						4
Actuated Green, G (s)	65.7	28.1	11.1	80.8	28.1	28.1
Effective Green, g (s)	66.9	30.0	11.1	82.0	30.0	30.0
Actuated g/C Ratio	0.56	0.25	0.09	0.68	0.25	0.25
Clearance Time (s)	5.2	5.9	4.0	5.2	5.9	5.9
Vehicle Extension (s)	3.7	3.8	1.0	3.5	3.8	3.8
Lane Grp Cap (vph)	1791	250	201	2195	542	228
v/s Ratio Prot	c0.71	0.21	0.07	c0.79	c0.36	
v/s Ratio Perm						0.08
v/c Ratio	1.27	0.86	0.71	1.15	1.46	0.31
Uniform Delay, d1	26.5	43.0	52.9	19.0	45.0	36.6
Progression Factor	1.62	1.07	0.97	0.91	1.00	1.00
Incremental Delay, d2	121.5	3.8	4.1	70.0	216.0	3.5
Delay (s)	164.5	49.9	55.5	87.3	261.0	40.2
Level of Service	F	D	E	F	F	D
Approach Delay (s)	149.0			85.6	203.8	
Approach LOS	F			F	F	

Intersection Summary			
HCM Average Control Delay	131.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	122.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↔↔	↕↕	↗	↖	↕↕↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.88	0.95	1.00	1.00	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3072	2493	3167	1417	1583	4550
Flt Permitted	0.95	1.00	1.00	1.00	0.40	1.00
Satd. Flow (perm)	3072	2493	3167	1417	671	4550
Volume (vph)	616	426	407	321	244	316
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	677	468	447	353	268	347
RTOR Reduction (vph)	0	282	0	16	0	0
Lane Group Flow (vph)	677	186	447	337	268	347
Turn Type		Perm		pm+ov	pm+pt	
Protected Phases	4		2	4	1	6
Permitted Phases		4		2	6	
Actuated Green, G (s)	35.2	35.2	36.8	72.0	44.8	44.8
Effective Green, g (s)	35.7	35.7	38.3	74.0	46.3	46.3
Actuated g/C Ratio	0.40	0.40	0.43	0.82	0.51	0.51
Clearance Time (s)	4.5	4.5	5.5	4.5	3.0	5.5
Vehicle Extension (s)	3.0	3.0	5.0	3.0	3.0	5.0
Lane Grp Cap (vph)	1219	989	1348	1228	386	2341
v/s Ratio Prot	c0.22		0.14	0.11	c0.03	0.08
v/s Ratio Perm		0.07		0.13	c0.33	
v/c Ratio	0.56	0.19	0.33	0.27	0.69	0.15
Uniform Delay, d1	21.0	17.7	17.3	1.8	17.3	11.5
Progression Factor	1.09	3.89	1.29	0.79	1.00	1.00
Incremental Delay, d2	0.3	0.0	0.7	0.1	5.3	0.1
Delay (s)	23.1	68.9	23.0	1.6	22.6	11.6
Level of Service	C	E	C	A	C	B
Approach Delay (s)	41.8		13.5			16.4
Approach LOS	D		B			B

Intersection Summary

HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 75: Olympic Blvd & Century Park West



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↗	↑↑↑	↑↑↑	↖	↖↗	↖↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.91	1.00	0.97	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3072	4550	4550	1417	3072	2493
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3072	4550	4550	1417	3072	2493
Volume (vph)	167	2251	2399	108	9	838
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	170	2297	2448	110	9	855
RTOR Reduction (vph)	0	0	0	50	0	0
Lane Group Flow (vph)	170	2297	2448	60	9	855
Turn Type	Prot			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)	10.2	53.8	39.6	39.6	26.3	26.3
Effective Green, g (s)	10.2	55.0	40.8	40.8	27.0	27.0
Actuated g/C Ratio	0.11	0.61	0.45	0.45	0.30	0.30
Clearance Time (s)	4.0	5.2	5.2	5.2	4.7	4.7
Vehicle Extension (s)	3.0	4.8	4.6	4.6	3.0	3.0
Lane Grp Cap (vph)	348	2781	2063	642	922	748
v/s Ratio Prot	0.06	c0.50	c0.54		0.00	
v/s Ratio Perm				0.04		c0.34
v/c Ratio	0.49	0.83	1.19	0.09	0.01	1.14
Uniform Delay, d1	37.5	13.7	24.6	14.0	22.1	31.5
Progression Factor	0.55	2.31	1.00	1.00	0.97	0.78
Incremental Delay, d2	0.1	0.3	89.2	0.3	0.0	78.9
Delay (s)	20.6	32.0	113.8	14.3	21.4	103.5
Level of Service	C	C	F	B	C	F
Approach Delay (s)		31.2	109.5		102.7	
Approach LOS		C	F		F	

Intersection Summary

HCM Average Control Delay	75.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4550	1417	1583	4515		1583	3151		1583	3121	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.13	1.00		0.15	1.00	
Satd. Flow (perm)	1583	4550	1417	1583	4515		215	3151		247	3121	
Volume (vph)	140	2550	343	97	2257	121	181	1092	37	126	929	98
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	144	2629	354	100	2327	125	187	1126	38	130	958	101
RTOR Reduction (vph)	0	0	115	0	5	0	0	2	0	0	7	0
Lane Group Flow (vph)	144	2629	239	100	2447	0	187	1162	0	130	1052	0
Turn Type	Prot		Perm	Prot		pm+pt				Perm		
Protected Phases	1	6		5	2		3	8				4
Permitted Phases			6				8			4		
Actuated Green, G (s)	13.5	54.6	54.6	11.4	52.5		40.0	40.0		26.0	26.0	
Effective Green, g (s)	13.5	55.6	55.6	11.4	53.5		41.0	41.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.46	0.46	0.10	0.45		0.34	0.34		0.22	0.22	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		3.5	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	178	2108	657	150	2013		187	1077		56	702	
v/s Ratio Prot	c0.09	c0.58		0.06	0.54		0.08	c0.37			0.34	
v/s Ratio Perm			0.17				0.26			c0.53		
v/c Ratio	0.81	1.25	0.36	0.67	1.22		1.00	1.08		2.32	1.50	
Uniform Delay, d1	52.0	32.2	20.8	52.5	33.2		57.2	39.5		46.5	46.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.58	1.44		1.00	1.00	
Incremental Delay, d2	21.9	115.4	1.6	8.4	101.8		19.7	37.5		646.6	231.8	
Delay (s)	73.8	147.6	22.3	60.8	135.1		110.3	94.4		693.1	278.3	
Level of Service	E	F	C	E	F		F	F		F	F	
Approach Delay (s)		130.0			132.2			96.6			323.7	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	153.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	117.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑	↖	↖↗	↑↑	↖
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3212	1000	2168	3212	1000	2168	2235	1000	2168	2235	1000
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2168	3212	1000	2168	3212	1000	2168	2235	1000	2168	2235	1000
Volume (vph)	85	2076	117	86	2620	480	74	1009	78	372	1307	87
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	88	2140	121	89	2701	495	76	1040	80	384	1347	90
RTOR Reduction (vph)	0	0	51	0	0	28	0	0	48	0	0	39
Lane Group Flow (vph)	88	2140	70	89	2701	467	76	1040	32	384	1347	51
Turn Type	Prot		Perm	Prot	pm+ov	Prot		Perm	Prot		Perm	
Protected Phases	1	6		5	2	7	3	8		7	4	
Permitted Phases			6			2			8			4
Actuated Green, G (s)	7.5	26.7	26.7	11.0	30.2	53.0	7.5	39.6	39.6	22.8	54.9	54.9
Effective Green, g (s)	7.5	28.2	28.2	11.0	31.7	54.5	7.5	42.0	42.0	22.8	57.3	57.3
Actuated g/C Ratio	0.06	0.23	0.23	0.09	0.26	0.45	0.06	0.35	0.35	0.19	0.48	0.48
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5	4.0	4.0	6.4	6.4	4.0	6.4	6.4
Vehicle Extension (s)	2.0	4.5	4.5	2.0	5.2	2.0	2.0	4.7	4.7	2.0	4.7	4.7
Lane Grp Cap (vph)	136	755	235	199	849	454	136	782	350	412	1067	478
v/s Ratio Prot	0.04	c0.67		0.04	c0.84	0.20	0.04	c0.47		0.18	c0.60	
v/s Ratio Perm			0.07			0.27			0.03			0.05
v/c Ratio	0.65	2.83	0.30	0.45	3.18	1.03	0.56	1.33	0.09	0.93	1.26	0.11
Uniform Delay, d1	55.0	45.9	37.7	51.6	44.1	32.8	54.6	39.0	26.2	47.8	31.4	17.3
Progression Factor	0.97	0.48	0.16	0.95	0.94	0.90	1.00	1.00	1.00	0.63	0.52	0.19
Incremental Delay, d2	0.7	825.8	0.3	0.1	981.9	20.9	2.8	157.2	0.2	14.1	121.2	0.1
Delay (s)	53.8	847.9	6.4	49.3	1023.5	50.3	57.5	196.2	26.4	44.1	137.7	3.4
Level of Service	D	F	A	D	F	D	E	F	C	D	F	A
Approach Delay (s)		774.8			850.5			176.0			111.3	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	581.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	151.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.86		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	5711		1583	3167	1417	1583	3167	1417
Flt Permitted	0.11	1.00	1.00	0.11	1.00		0.15	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	183	4550	1417	188	5711		252	3167	1417	219	3167	1417
Volume (vph)	293	2229	146	153	3161	85	33	778	51	225	1067	284
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	302	2298	151	158	3259	88	34	802	53	232	1100	293
RTOR Reduction (vph)	0	0	30	0	4	0	0	0	4	0	0	0
Lane Group Flow (vph)	302	2298	121	158	3343	0	34	802	49	232	1100	293
Turn Type	pm+pt		Perm	pm+pt		Perm		pm+ov	pm+pt		pm+ov	
Protected Phases	1	6		5	2			8	5	7	4	1
Permitted Phases	6		6	2		8	8	8	4			4
Actuated Green, G (s)	43.0	36.0	36.0	41.0	35.0	25.0	25.0	31.0	34.0	34.0	41.0	
Effective Green, g (s)	43.5	36.5	36.5	41.5	35.5	26.5	26.5	32.5	35.5	35.5	42.5	
Actuated g/C Ratio	0.48	0.41	0.41	0.46	0.39	0.29	0.29	0.36	0.39	0.39	0.47	
Clearance Time (s)	4.0	4.5	4.5	4.0	4.5	5.5	5.5	4.0	4.0	5.5	4.0	
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	5.0	3.0	3.0	5.0	3.0	
Lane Grp Cap (vph)	197	1845	575	180	2253	74	933	575	162	1249	732	
v/s Ratio Prot	c0.12	0.51		0.06	0.59		0.25	0.01	c0.08	0.35	0.03	
v/s Ratio Perm	c0.62		0.09	0.35		0.14		0.03	c0.49		0.18	
v/c Ratio	1.53	1.25	0.21	0.88	1.48	0.46	0.86	0.08	1.43	0.88	0.40	
Uniform Delay, d1	43.7	26.8	17.4	43.5	27.2	25.9	30.0	18.9	24.6	25.3	15.5	
Progression Factor	2.32	0.71	0.78	1.63	1.47	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	242.2	110.9	0.1	4.7	217.9	9.2	8.7	0.1	226.1	8.1	0.4	
Delay (s)	343.4	130.0	13.6	75.9	258.0	35.1	38.7	19.0	250.7	33.4	15.8	
Level of Service	F	F	B	E	F	D	D	B	F	C	B	
Approach Delay (s)		147.1			249.8		37.4			61.2		
Approach LOS		F			F		D			E		

Intersection Summary

HCM Average Control Delay	161.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	125.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1583	3068		1583	3157		1504	1583	1417		1603	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1583	3068		1583	3157		1504	1583	1417		1603	
Volume (vph)	10	1139	299	178	968	21	339	631	777	27	283	109
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	1186	311	185	1008	22	353	657	809	28	295	114
RTOR Reduction (vph)	0	19	0	0	1	0	0	0	236	0	0	0
Lane Group Flow (vph)	10	1478	0	185	1029	0	353	657	573	0	437	0
Turn Type	Prot		Prot		Split		pm+ov		Split			
Protected Phases	1	6		5	2		3	3	5		4	4
Permitted Phases									3			
Actuated Green, G (s)	1.5	54.9		17.4	70.8		10.0	10.0	27.4		20.0	
Effective Green, g (s)	0.5	55.7		16.4	71.6		10.9	10.9	27.3		21.0	
Actuated g/C Ratio	0.00	0.46		0.14	0.60		0.09	0.09	0.23		0.18	
Clearance Time (s)	3.0	4.8		3.0	4.8		4.9	4.9	3.0		5.0	
Vehicle Extension (s)	3.0	6.0		3.0	6.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	7	1424		216	1884		137	144	370		281	
v/s Ratio Prot	0.01	c0.48		0.12	0.33		0.23	c0.41	c0.21		c0.27	
v/s Ratio Perm									0.19			
v/c Ratio	1.43	1.04		0.86	0.55		2.58	4.56	1.55		1.56	
Uniform Delay, d1	59.8	32.1		50.6	14.5		54.5	54.5	46.4		49.5	
Progression Factor	1.11	1.07		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	251.9	19.7		26.7	1.1		730.3	1619.0	259.5		266.6	
Delay (s)	318.5	54.1		77.4	15.6		784.9	1673.5	305.8		316.1	
Level of Service	F	D		E	B		F	F	F		F	
Approach Delay (s)		55.8			25.0			892.8			316.1	
Approach LOS		E			C			F			F	

Intersection Summary

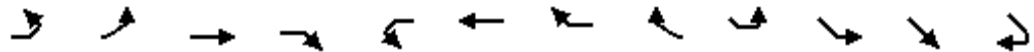
HCM Average Control Delay	377.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.62		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	135.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.89		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1504	1510	1417	1583	1479		1583	1654		1583	1667	1417
Flt Permitted	0.71	0.68	1.00	0.95	1.00		0.35	1.00		0.21	1.00	1.00
Satd. Flow (perm)	1120	1074	1417	1583	1479		582	1654		350	1667	1417
Volume (vph)	525	10	172	20	18	55	64	716	39	31	550	346
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	547	10	179	21	19	57	67	746	41	32	573	360
RTOR Reduction (vph)	0	0	153	0	52	0	0	2	0	0	0	144
Lane Group Flow (vph)	274	283	26	21	24	0	67	785	0	32	573	216
Turn Type	Perm		Perm	Split			Perm			Perm		Perm
Protected Phases		4		3	3			2			2	
Permitted Phases	4		4				2			2		2
Actuated Green, G (s)	10.0	10.0	10.0	6.0	6.0		43.6	43.6		43.6	43.6	43.6
Effective Green, g (s)	11.0	11.0	11.0	7.0	7.0		45.0	45.0		45.0	45.0	45.0
Actuated g/C Ratio	0.15	0.15	0.15	0.09	0.09		0.60	0.60		0.60	0.60	0.60
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.4	5.4		5.4	5.4	5.4
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	164	158	208	148	138		349	992		210	1000	850
v/s Ratio Prot				0.01	c0.02			c0.47			0.34	
v/s Ratio Perm	0.24	c0.26	0.02				0.12			0.09		0.15
v/c Ratio	1.67	1.79	0.13	0.14	0.18		0.19	0.79		0.15	0.57	0.25
Uniform Delay, d1	32.0	32.0	27.8	31.2	31.3		6.8	11.4		6.6	9.1	7.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	327.1	380.2	0.3	0.4	0.6		1.2	6.4		1.5	2.4	0.7
Delay (s)	359.1	412.2	28.1	31.7	32.0		8.0	17.9		8.1	11.5	7.8
Level of Service	F	F	C	C	C		A	B		A	B	A
Approach Delay (s)		299.0			31.9			17.1			10.0	
Approach LOS		F			C			B			B	

Intersection Summary

HCM Average Control Delay	93.3	HCM Level of Service	F
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	SEL2	SEL	SET	SER
Lane Configurations			↕	↗		↕↗				↘	↕↗	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)			4.0	4.0		4.0				4.0	4.0	
Lane Util. Factor			1.00	1.00		0.95				1.00	0.95	
Frt			1.00	0.85		0.98				1.00	0.99	
Flt Protected			0.99	1.00		0.98				0.95	1.00	
Satd. Flow (prot)			1160	1000		2163				1118	2209	
Flt Permitted			0.36	1.00		0.55				0.50	1.00	
Satd. Flow (perm)			421	1000		1210				589	2209	
Volume (vph)	11	225	589	48	316	543	53	55	11	5	553	48
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	11	234	614	50	329	566	55	57	11	5	576	50
RTOR Reduction (vph)	0	0	0	26	0	6	0	0	0	0	9	0
Lane Group Flow (vph)	0	0	859	24	0	1001	0	0	0	16	617	0
Turn Type		Perm		Perm	Perm				Perm	Perm		
Protected Phases			6			2					4	
Permitted Phases		6		6	2				4	4		
Actuated Green, G (s)			34.0	34.0		34.0				30.0	30.0	
Effective Green, g (s)			36.0	36.0		36.0				31.0	31.0	
Actuated g/C Ratio			0.48	0.48		0.48				0.41	0.41	
Clearance Time (s)			6.0	6.0		6.0				5.0	5.0	
Vehicle Extension (s)			3.0	3.0		3.0				3.0	3.0	
Lane Grp Cap (vph)			202	480		581				243	913	
v/s Ratio Prot											0.28	
v/s Ratio Perm			c2.04	0.02		0.83				0.03		
v/c Ratio			4.25	0.05		4.77dl				0.07	0.68	
Uniform Delay, d1			19.5	10.4		19.5				13.3	17.9	
Progression Factor			1.09	1.11		1.00				1.00	1.00	
Incremental Delay, d2			1464.7	0.0		332.7				0.5	4.0	
Delay (s)			1486.0	11.6		352.2				13.8	21.9	
Level of Service			F	B		F				B	C	
Approach Delay (s)			1404.9			352.2					21.7	
Approach LOS			F			F					C	

Intersection Summary

HCM Average Control Delay	474.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.79		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	187.9%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	NWL	NWT	NWR	NWR2
Lane Configurations				
Ideal Flow (vphpl)	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	
Satd. Flow (prot)	1118	1176	1000	
Flt Permitted	0.34	1.00	1.00	
Satd. Flow (perm)	395	1176	1000	
Volume (vph)	173	276	99	439
Peak-hour factor, PHF	0.96	0.96	0.96	0.96
Adj. Flow (vph)	180	288	103	457
RTOR Reduction (vph)	0	0	120	0
Lane Group Flow (vph)	180	288	440	0
Turn Type	Perm		Perm	
Protected Phases		8		
Permitted Phases	8		8	
Actuated Green, G (s)	30.0	30.0	30.0	
Effective Green, g (s)	31.0	31.0	31.0	
Actuated g/C Ratio	0.41	0.41	0.41	
Clearance Time (s)	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	
Lane Grp Cap (vph)	163	486	413	
v/s Ratio Prot		0.24		
v/s Ratio Perm	0.46		0.44	
v/c Ratio	1.10	0.59	1.07	
Uniform Delay, d1	22.0	17.1	22.0	
Progression Factor	1.15	1.04	1.27	
Incremental Delay, d2	55.8	0.5	35.1	
Delay (s)	81.1	18.2	63.1	
Level of Service	F	B	E	
Approach Delay (s)		53.6		
Approach LOS		D		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		1.00	0.86			1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98			0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	1.00	1.00
Satd. Flow (prot)	2168	4026		1118	3964			1123		1118	1176	1000
Flt Permitted	0.95	1.00		0.06	1.00			0.23		0.37	1.00	1.00
Satd. Flow (perm)	2168	4026		68	3964			262		440	1176	1000
Volume (vph)	240	2364	85	132	2367	377	322	356	177	245	463	290
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	253	2488	89	139	2492	397	339	375	186	258	487	305
RTOR Reduction (vph)	0	3	0	0	19	0	0	3	0	0	0	0
Lane Group Flow (vph)	253	2574	0	139	2870	0	0	897	0	258	487	305
Turn Type	Prot		Perm			Perm			Perm		pm+ov	
Protected Phases	5	2			6			4			4	5
Permitted Phases				6			4			4		4
Actuated Green, G (s)	18.9	92.0		69.1	69.1			49.0		49.0	49.0	67.9
Effective Green, g (s)	18.9	92.0		69.1	69.1			50.0		50.0	50.0	68.9
Actuated g/C Ratio	0.13	0.61		0.46	0.46			0.33		0.33	0.33	0.46
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0		5.0	5.0	4.0
Vehicle Extension (s)	1.5	4.0		4.0	4.0			3.0		3.0	3.0	1.5
Lane Grp Cap (vph)	273	2469		31	1826			87		147	392	486
v/s Ratio Prot	0.12	c0.64			0.72						0.41	0.08
v/s Ratio Perm				c2.04				c3.43		0.59		0.23
v/c Ratio	0.93	1.04		4.48	1.57			10.31		1.76	1.24	0.63
Uniform Delay, d1	64.9	29.0		40.5	40.5			50.0		50.0	50.0	30.8
Progression Factor	1.33	0.64		1.00	1.00			1.00		0.93	0.93	1.05
Incremental Delay, d2	5.5	20.6		1639.2	260.0			4214.2		350.5	117.5	0.7
Delay (s)	91.9	39.1		1679.7	300.4			4264.2		397.1	164.1	33.0
Level of Service	F	D		F	F			F		F	F	C
Approach Delay (s)		43.8			363.8			4264.2			183.3	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	673.1	HCM Level of Service	F
HCM Volume to Capacity ratio	6.10		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	202.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑	↗	↖	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.96		1.00	0.98		1.00	1.00	0.55	1.00	1.00	0.79
Flpb, ped/bikes	0.94	1.00		0.98	1.00		0.92	1.00	1.00	0.66	1.00	1.00
Frt	1.00	0.97		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1489	1541		1554	1607		1463	3167	776	1052	3167	1122
Flt Permitted	0.55	1.00		0.29	1.00		0.35	1.00	1.00	0.54	1.00	1.00
Satd. Flow (perm)	861	1541		479	1607		538	3167	776	595	3167	1122
Volume (vph)	48	316	92	171	293	47	134	311	155	26	553	191
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	50	329	96	178	305	49	140	324	161	27	576	199
RTOR Reduction (vph)	0	14	0	0	7	0	0	0	40	0	0	125
Lane Group Flow (vph)	50	411	0	178	347	0	140	324	121	27	576	74
Conf. Peds. (#/hr)	117		216	216		117	196		419	419		196
Conf. Bikes (#/hr)			5			6			8			20
Turn Type	Perm			pm+pt			Perm		pm+ov	Perm		Perm
Protected Phases		6		5	2			8	5		4	
Permitted Phases	6			2			8	8	4			4
Actuated Green, G (s)	27.6	27.6		37.6	37.6		27.0	27.0	33.5	27.0	27.0	27.0
Effective Green, g (s)	29.0	29.0		39.0	39.0		28.0	28.0	34.0	28.0	28.0	28.0
Actuated g/C Ratio	0.39	0.39		0.52	0.52		0.37	0.37	0.45	0.37	0.37	0.37
Clearance Time (s)	5.4	5.4		3.5	5.4		5.0	5.0	3.5	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	333	596		335	836		201	1182	393	222	1182	419
v/s Ratio Prot		c0.27		c0.04	0.22			0.10	0.02		0.18	
v/s Ratio Perm	0.06			0.23			c0.26		0.13	0.05		0.07
v/c Ratio	0.15	0.69		0.53	0.42		0.70	0.27	0.31	0.12	0.49	0.18
Uniform Delay, d1	15.0	19.2		11.5	11.0		19.9	16.4	13.0	15.4	18.0	15.8
Progression Factor	0.76	0.83		1.00	1.00		0.97	0.89	1.17	1.00	1.00	1.00
Incremental Delay, d2	0.9	6.2		1.6	1.5		15.9	0.5	0.4	1.1	1.4	0.9
Delay (s)	12.2	22.0		13.1	12.5		35.1	15.2	15.7	16.5	19.4	16.7
Level of Service	B	C		B	B		D	B	B	B	B	B
Approach Delay (s)		21.0			12.7			19.8			18.7	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↕			↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	1.00
Frbp, ped/bikes		1.00	1.00		0.91		1.00	0.92			1.00	0.30
Flpb, ped/bikes		0.98	1.00		0.94		0.85	1.00			0.97	1.00
Frt		1.00	0.85		0.97		1.00	0.98			1.00	0.85
Flt Protected		0.99	1.00		0.99		0.95	1.00			0.99	1.00
Satd. Flow (prot)		1613	1417		1383		1350	2877			3046	420
Flt Permitted		0.86	1.00		0.93		0.22	1.00			0.81	1.00
Satd. Flow (perm)		1407	1417		1301		313	2877			2489	420
Volume (vph)	39	161	131	67	337	133	168	476	58	99	781	61
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	40	166	135	69	347	137	173	491	60	102	805	63
RTOR Reduction (vph)	0	0	135	0	1	0	0	3	0	0	0	4
Lane Group Flow (vph)	0	206	0	0	552	0	173	548	0	0	907	59
Confl. Peds. (#/hr)	570		715	715		570	814		795	795		814
Confl. Bikes (#/hr)			9			12			43			28
Turn Type	Perm		NA	Perm			Perm			Perm		Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		2
Actuated Green, G (s)		30.5	0.0		30.5		34.1	34.1			34.1	34.1
Effective Green, g (s)		32.0	0.0		32.0		35.0	35.0			35.0	35.0
Actuated g/C Ratio		0.43	0.00		0.43		0.47	0.47			0.47	0.47
Clearance Time (s)		5.5			5.5		4.9	4.9			4.9	4.9
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		600	0		555		146	1343			1162	196
v/s Ratio Prot								0.19				
v/s Ratio Perm		0.15			c0.42		c0.55				0.36	0.14
v/c Ratio		0.34	0.00		0.99		1.18	0.41			0.78	0.30
Uniform Delay, d1		14.4	37.5		21.4		20.0	13.2			16.8	12.4
Progression Factor		1.00	1.00		1.00		1.00	1.00			1.71	1.83
Incremental Delay, d2		1.6	0.0		36.8		132.7	0.9			4.8	3.6
Delay (s)		16.0	37.5		58.2		152.7	14.1			33.4	26.2
Level of Service		B	D		E		F	B			C	C
Approach Delay (s)		24.5			58.2			47.2			32.9	
Approach LOS		C			E			D			C	
Intersection Summary												
HCM Average Control Delay			41.2				HCM Level of Service				D	
HCM Volume to Capacity ratio			1.09									
Actuated Cycle Length (s)			75.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			115.9%				ICU Level of Service			H		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕	↗		↕↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor		0.95			0.95			0.95	1.00		0.95	
Frbp, ped/bikes		0.82			0.98			1.00	0.54		0.98	
Flpb, ped/bikes		1.00			0.96			1.00	1.00		1.00	
Frt		0.91			0.99			1.00	0.85		0.99	
Flt Protected		1.00			0.98			1.00	1.00		1.00	
Satd. Flow (prot)		1645			2030			2235	540		2186	
Flt Permitted		0.90			0.57			1.00	1.00		0.95	
Satd. Flow (perm)		1488			1180			2235	540		2081	
Volume (vph)	22	196	344	309	372	30	0	867	543	5	1151	43
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	22	200	351	315	380	31	0	885	554	5	1174	44
RTOR Reduction (vph)	0	2	0	0	2	0	0	0	79	0	2	0
Lane Group Flow (vph)	0	571	0	0	724	0	0	885	475	0	1221	0
Confl. Peds. (#/hr)	238		195	195		238	518		548	548		518
Confl. Bikes (#/hr)			8			5			23			18
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		
Actuated Green, G (s)		61.5			61.5			78.0	78.0		78.0	
Effective Green, g (s)		63.0			63.0			79.0	79.0		79.0	
Actuated g/C Ratio		0.42			0.42			0.53	0.53		0.53	
Clearance Time (s)		5.5			5.5			5.0	5.0		5.0	
Vehicle Extension (s)		3.0			3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		625			496			1177	284		1096	
v/s Ratio Prot								0.40				
v/s Ratio Perm		0.38			c0.61				c0.88		0.59	
v/c Ratio		1.17dr			2.05dl			0.75	1.67		1.11	
Uniform Delay, d1		41.0			43.5			27.8	35.5		35.5	
Progression Factor		0.74			1.04			1.74	2.21		1.00	
Incremental Delay, d2		2.6			207.6			0.4	304.0		64.2	
Delay (s)		32.9			253.0			48.7	382.3		99.7	
Level of Service		C			F			D	F		F	
Approach Delay (s)		32.9			253.0			177.1			99.7	
Approach LOS		C			F			F			F	

Intersection Summary			
HCM Average Control Delay	146.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.58		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	158.4%	ICU Level of Service	H
Analysis Period (min)	15		
dl	Defacto Left Lane. Recode with 1 though lane as a left lane.		
dr	Defacto Right Lane. Recode with 1 though lane as a right lane.		
c	Critical Lane Group		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑		↔↔	↑↑↑		↔	↑↑↑		↔	↑↑↑	↔
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		0.97	0.86		1.00	0.91		1.00	0.86	0.86
Frbp, ped/bikes	1.00	0.96		1.00	0.99		1.00	0.94		1.00	0.98	0.71
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.93	1.00	1.00
Frt	1.00	0.98		1.00	1.00		1.00	0.98		1.00	0.99	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	2168	3799		2168	3988		1118	2968		1043	2953	614
Flt Permitted	0.95	1.00		0.95	1.00		0.06	1.00		0.21	1.00	1.00
Satd. Flow (perm)	2168	3799		2168	3988		75	2968		234	2953	614
Volume (vph)	280	2482	349	61	2741	85	715	1018	174	195	1327	400
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	292	2585	364	64	2855	89	745	1060	181	203	1382	417
RTOR Reduction (vph)	0	17	0	0	3	0	0	16	0	0	4	1
Lane Group Flow (vph)	292	2932	0	64	2941	0	745	1225	0	203	1463	331
Conf. Peds. (#/hr)	262		298	298		262	247		444	444		247
Conf. Bikes (#/hr)			4			3			8			8
Turn Type	Prot			Prot		pm+pt			Perm		pm+ov	
Protected Phases	5	2		1	6	3	8				4	5
Permitted Phases						8			4			4
Actuated Green, G (s)	7.0	47.5		5.0	45.5	82.1	82.1		57.1	57.1		64.1
Effective Green, g (s)	7.0	49.0		5.0	47.0	84.0	84.0		59.0	59.0		66.0
Actuated g/C Ratio	0.05	0.33		0.03	0.31	0.56	0.56		0.39	0.39		0.44
Clearance Time (s)	4.0	5.5		4.0	5.5	4.0	5.9		5.9	5.9		4.0
Vehicle Extension (s)	2.0	4.0		2.0	4.0	3.0	2.0		2.0	2.0		2.0
Lane Grp Cap (vph)	101	1241		72	1250	188	1662		92	1162		287
v/s Ratio Prot	c0.13	c0.77		0.03	c0.74	c0.55	0.41			0.50		0.05
v/s Ratio Perm						c1.67			0.87			0.49
v/c Ratio	2.89	2.36		0.89	2.35	3.96	0.74		2.21	1.26		1.15
Uniform Delay, d1	71.5	50.5		72.2	51.5	50.0	24.7		45.5	45.5		42.0
Progression Factor	1.17	0.93		1.15	1.21	1.00	1.00		1.10	1.10		1.18
Incremental Delay, d2	853.4	613.5		11.5	609.1	1345.9	1.5		546.1	117.1		73.7
Delay (s)	937.1	660.3		94.7	671.4	1395.9	26.2		596.2	167.3		123.3
Level of Service	F	F		F	F	F	C		F	F		F
Approach Delay (s)		685.3			659.1		540.0			203.5		
Approach LOS		F			F		F			F		F

Intersection Summary			
HCM Average Control Delay	555.2	HCM Level of Service	F
HCM Volume to Capacity ratio	3.25		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	200.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.94			0.96		1.00	0.98		1.00	0.98	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1091			1104		1118	2181		1118	2198	
Flt Permitted		0.65			0.69		0.15	1.00		0.15	1.00	
Satd. Flow (perm)		722			770		181	2181		181	2198	
Volume (vph)	117	89	153	358	273	305	60	1321	257	212	1298	164
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	136	103	178	416	317	355	70	1536	299	247	1509	191
RTOR Reduction (vph)	0	5	0	0	5	0	0	27	0	0	16	0
Lane Group Flow (vph)	0	412	0	0	1083	0	70	1808	0	247	1684	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		25.0			25.0		25.6	25.6		25.6	25.6	
Effective Green, g (s)		26.0			26.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio		0.43			0.43		0.43	0.43		0.43	0.43	
Clearance Time (s)		5.0			5.0		4.4	4.4		4.4	4.4	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		313			334		78	945		78	952	
v/s Ratio Prot								0.83			0.77	
v/s Ratio Perm		0.57			c1.41		0.39			c1.36		
v/c Ratio		1.32			3.24		0.90	1.91		3.17	1.77	
Uniform Delay, d1		17.0			17.0		15.8	17.0		17.0	17.0	
Progression Factor		1.00			1.00		0.31	0.30		1.00	1.00	
Incremental Delay, d2		163.1			1017.5		14.0	411.5		1007.6	350.1	
Delay (s)		180.1			1034.5		18.8	416.6		1024.6	367.1	
Level of Service		F			F		B	F		F	F	
Approach Delay (s)		180.1			1034.5			402.0			450.5	
Approach LOS		F			F			F			F	

Intersection Summary

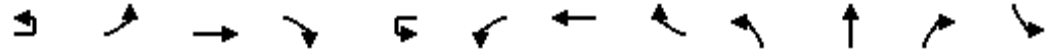
HCM Average Control Delay	530.8	HCM Level of Service	F
HCM Volume to Capacity ratio	3.20		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	216.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	1108		1118	1161		1118	2212		1118	2196	
Flt Permitted	0.43	1.00		0.17	1.00		0.15	1.00		0.15	1.00	
Satd. Flow (perm)	504	1108		200	1161		174	2212		174	2196	
Volume (vph)	158	379	241	69	334	31	91	1529	117	44	1719	227
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	161	387	246	70	341	32	93	1560	119	45	1754	232
RTOR Reduction (vph)	0	3	0	0	5	0	0	9	0	0	17	0
Lane Group Flow (vph)	161	630	0	70	368	0	93	1670	0	45	1969	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		4		4		2		2		2	
Permitted Phases	4		4		4		2		2		2	
Actuated Green, G (s)	23.4	23.4		23.4	23.4		26.5	26.5		26.5	26.5	
Effective Green, g (s)	25.0	25.0		25.0	25.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.45	0.45		0.45	0.45	
Clearance Time (s)	5.6	5.6		5.6	5.6		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	210	462		83	484		78	995		78	988	
v/s Ratio Prot	c0.57				0.32		0.75				c0.90	
v/s Ratio Perm	0.32		0.35		0.53		0.26					
v/c Ratio	0.77	1.36		0.84	0.76		1.19	1.68		0.58	1.99	
Uniform Delay, d1	15.0	17.5		15.7	14.9		16.5	16.5		12.3	16.5	
Progression Factor	0.56	0.53		1.00	1.00		1.51	1.61		0.68	0.70	
Incremental Delay, d2	7.6	170.3		50.6	6.8		117.3	306.4		2.8	447.1	
Delay (s)	16.1	179.6		66.3	21.7		142.2	333.1		11.1	458.7	
Level of Service	B		F		E		C		F		F	
Approach Delay (s)	146.4				28.7		323.0				448.8	
Approach LOS	F				C		F				F	

Intersection Summary

HCM Average Control Delay	320.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.69		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	169.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔↔	↔↔↔	↔		↔↔	↔↔↔	↔	↔	↔↔		↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		0.97	0.91	1.00		0.97	0.91	1.00	1.00	0.95		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.99		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		3072	4550	1417		3072	4550	1417	1583	3144		1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.09	1.00		0.09
Satd. Flow (perm)		3072	4550	1417		3072	4550	1417	148	3144		148
Volume (vph)	3	300	2040	110	22	207	1935	462	258	1209	61	518
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	3	303	2061	111	22	209	1955	467	261	1221	62	523
RTOR Reduction (vph)	0	0	0	44	0	0	0	26	0	3	0	0
Lane Group Flow (vph)	0	306	2061	67	0	231	1955	441	261	1280	0	523
Turn Type	Prot	Prot	pm+ov		Prot	Prot	pm+ov	pm+pt				pm+pt
Protected Phases	1	1	6	3	5	5	2	7	3	8		7
Permitted Phases				6				2	8			4
Actuated Green, G (s)		16.5	31.0	43.0		14.5	29.0	41.0	54.3	42.3		54.3
Effective Green, g (s)		16.5	32.5	44.5		14.5	30.5	42.5	57.0	45.0		57.0
Actuated g/C Ratio		0.14	0.27	0.37		0.12	0.25	0.35	0.48	0.38		0.48
Clearance Time (s)		4.0	5.5	4.0		4.0	5.5	4.0	4.0	6.7		4.0
Vehicle Extension (s)		3.0	5.0	3.0		3.0	5.0	3.0	3.0	4.0		3.0
Lane Grp Cap (vph)		422	1232	573		371	1156	549	214	1179		214
v/s Ratio Prot		c0.10	c0.45	0.01		0.08	0.43	0.08	0.12	0.41		c0.24
v/s Ratio Perm				0.04				0.23	0.46			c0.92
v/c Ratio		0.73	1.67	0.12		0.62	1.69	0.80	1.22	1.09		2.44
Uniform Delay, d1		49.6	43.8	24.8		50.1	44.8	35.0	56.2	37.5		35.6
Progression Factor		1.52	0.74	0.07		1.53	0.77	0.31	1.00	1.00		1.30
Incremental Delay, d2		0.6	303.1	0.0		0.3	311.4	0.8	133.4	52.7		651.0
Delay (s)		75.8	335.3	1.7		77.1	346.0	11.5	189.6	90.2		697.4
Level of Service		E	F	A		E	F	B	F	F		F
Approach Delay (s)			288.3				263.7			107.0		
Approach LOS			F				F			F		

Intersection Summary

HCM Average Control Delay	254.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	136.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Ideal Flow (vphpl)	1700	1700
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3167	1417
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3167	1417
Volume (vph)	1591	102
Peak-hour factor, PHF	0.99	0.99
Adj. Flow (vph)	1607	103
RTOR Reduction (vph)	0	40
Lane Group Flow (vph)	1607	63
Turn Type		Perm
Protected Phases	4	
Permitted Phases		4
Actuated Green, G (s)	42.3	42.3
Effective Green, g (s)	45.0	45.0
Actuated g/C Ratio	0.38	0.38
Clearance Time (s)	6.7	6.7
Vehicle Extension (s)	4.0	4.0
Lane Grp Cap (vph)	1188	531
v/s Ratio Prot	0.51	
v/s Ratio Perm		0.04
v/c Ratio	1.35	0.12
Uniform Delay, d1	37.5	24.5
Progression Factor	1.06	1.16
Incremental Delay, d2	159.2	0.0
Delay (s)	198.9	28.6
Level of Service	F	C
Approach Delay (s)	307.8	
Approach LOS	F	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.86		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4521		1583	5682		1583	3142		1583	3139	
Flt Permitted	0.14	1.00		0.12	1.00		0.15	1.00		0.13	1.00	
Satd. Flow (perm)	228	4521		201	5682		247	3142		215	3139	
Volume (vph)	43	2229	98	189	3129	199	103	1256	70	288	1483	92
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	45	2322	102	197	3259	207	107	1308	73	300	1545	96
RTOR Reduction (vph)	0	5	0	0	10	0	0	4	0	0	0	0
Lane Group Flow (vph)	45	2419	0	197	3456	0	107	1377	0	300	1641	0
Turn Type	Perm		pm+pt			Perm		pm+pt				
Protected Phases	2		1			6		8		7		
Permitted Phases	2		6			8		8		4		
Actuated Green, G (s)	28.2	28.2		41.0	41.0		25.6	25.6		38.6	38.6	
Effective Green, g (s)	29.2	29.2		42.0	42.0		27.0	27.0		40.0	40.0	
Actuated g/C Ratio	0.32	0.32		0.47	0.47		0.30	0.30		0.44	0.44	
Clearance Time (s)	5.0	5.0		3.5	5.0		5.4	5.4		3.5	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	1467		229	2652		74	943		232	1395	
v/s Ratio Prot	c0.53		0.08			c0.61		c0.44		0.13		
v/s Ratio Perm	0.20		0.32			0.43		0.44		0.44		
v/c Ratio	0.61	1.65		0.86	1.30		1.45	1.46		1.29	1.18	
Uniform Delay, d1	25.6	30.4		20.7	24.0		31.5	31.5		42.7	25.0	
Progression Factor	1.77	1.72		2.15	0.57		0.97	0.95		1.00	1.00	
Incremental Delay, d2	3.3	292.2		3.2	136.7		244.7	211.1		160.1	87.2	
Delay (s)	48.7	344.4		47.9	150.2		275.2	241.1		202.8	112.2	
Level of Service	D	F		D	F		F	F		F	F	
Approach Delay (s)	339.0		144.7			243.5		126.2				
Approach LOS	F		F			F		F				

Intersection Summary

HCM Average Control Delay	206.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	135.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	4550	1417	1583	3167	1417	1583	3128	1700
Flt Permitted	0.13	1.00	1.00	0.13	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	224	4550	1417	224	4550	1417	1583	3167	1417	1583	3128	1700
Volume (vph)	217	1835	311	319	2250	435	324	759	91	306	1164	104
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	219	1854	314	322	2273	439	327	767	92	309	1176	105
RTOR Reduction (vph)	0	0	8	0	0	45	0	0	0	0	7	0
Lane Group Flow (vph)	219	1854	306	322	2273	394	327	767	92	309	1274	0
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	Prot		pm+ov		Prot	
Protected Phases	1	6	3	5	2	7	3	8	5	7	4	
Permitted Phases	6		6	2		2			8			
Actuated Green, G (s)	34.4	27.9	35.6	34.4	27.9	34.4	7.7	31.0	37.5	6.5	29.8	
Effective Green, g (s)	35.8	29.8	37.0	35.8	29.8	35.8	7.2	32.2	38.2	6.0	31.0	
Actuated g/C Ratio	0.40	0.33	0.41	0.40	0.33	0.40	0.08	0.36	0.42	0.07	0.34	
Clearance Time (s)	3.5	5.9	3.5	3.5	5.9	3.5	3.5	5.2	3.5	3.5	5.2	
Vehicle Extension (s)	3.0	5.0	3.0	3.0	5.0	3.0	3.0	5.0	3.0	3.0	5.0	
Lane Grp Cap (vph)	180	1507	583	180	1507	627	127	1133	664	106	1077	
v/s Ratio Prot	0.08	0.41	0.04	c0.12	0.50	0.04	c0.21	0.24	0.01	c0.20	c0.41	
v/s Ratio Perm	0.40		0.17	c0.59		0.24			0.06			
v/c Ratio	1.22	1.23	0.53	1.79	1.51	0.63	2.57	0.68	0.14	2.92	1.18	
Uniform Delay, d1	25.8	30.1	19.9	25.8	30.1	21.8	41.4	24.5	15.8	42.0	29.5	
Progression Factor	1.06	0.69	0.72	1.00	1.00	1.00	1.00	1.00	1.00	1.28	1.10	
Incremental Delay, d2	102.3	104.2	0.1	376.4	232.2	2.0	731.1	2.1	0.1	864.1	83.2	
Delay (s)	129.7	125.1	14.4	402.2	262.3	23.7	772.5	26.6	15.9	917.7	115.7	
Level of Service	F	F	B	F	F	C	F	C	B	F	F	
Approach Delay (s)		110.9			242.6			231.4			271.5	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	208.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	135.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↕		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.96		1.00	1.00	0.75	1.00	0.86		1.00	0.99	
Flpb, ped/bikes	0.84	1.00		0.66	1.00	1.00	0.95	1.00		0.89	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.92		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1328	1570		1052	1667	1062	1498	2515		1410	3126	
Flt Permitted	0.52	1.00		0.69	1.00	1.00	0.20	1.00		0.44	1.00	
Satd. Flow (perm)	729	1570		763	1667	1062	311	2515		650	3126	
Volume (vph)	9	88	10	287	204	85	106	232	274	139	1029	26
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	10	94	11	305	217	90	113	247	291	148	1095	28
RTOR Reduction (vph)	0	6	0	0	0	65	0	35	0	0	2	0
Lane Group Flow (vph)	10	99	0	305	217	25	113	503	0	148	1121	0
Confl. Peds. (#/hr)	212		207	207		212	177		203	203		177
Confl. Bikes (#/hr)			13			9			15			12
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4	2			2		
Actuated Green, G (s)	20.2	20.2		20.2	20.2	20.2	45.3	45.3		45.3	45.3	
Effective Green, g (s)	21.0	21.0		21.0	21.0	21.0	46.0	46.0		46.0	46.0	
Actuated g/C Ratio	0.28	0.28		0.28	0.28	0.28	0.61	0.61		0.61	0.61	
Clearance Time (s)	4.8	4.8		4.8	4.8	4.8	4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	204	440		214	467	297	191	1543		399	1917	
v/s Ratio Prot		0.06			0.13			0.20			0.36	
v/s Ratio Perm	0.01			c0.40		0.02	c0.36			0.23		
v/c Ratio	0.05	0.23		1.43	0.46	0.08	0.59	0.33		0.37	0.58	
Uniform Delay, d1	19.7	20.8		27.0	22.3	19.9	8.8	7.0		7.3	8.7	
Progression Factor	1.00	1.00		1.02	1.01	1.25	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	1.2		214.1	3.0	0.5	12.8	0.6		2.6	1.3	
Delay (s)	20.2	21.9		241.6	25.6	25.4	21.6	7.6		9.9	10.1	
Level of Service	C	C		F	C	C	C	A		A	B	
Approach Delay (s)		21.8			133.2			10.0			10.0	
Approach LOS		C			F			A			B	

Intersection Summary

HCM Average Control Delay	39.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕↕	↕	↕	↕↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes		0.99		1.00	0.86		1.00	1.00	0.72	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		0.98	1.00	1.00	0.93	1.00	
Frt		0.93		1.00	0.86		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1069		1118	865		1099	2235	722	1044	2234	
Flt Permitted		0.99		0.76	1.00		0.13	1.00	1.00	0.25	1.00	
Satd. Flow (perm)		1069		888	865		148	2235	722	278	2234	
Volume (vph)	1	1	2	218	8	217	3	821	155	407	1150	2
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1	1	2	222	8	221	3	838	158	415	1173	2
RTOR Reduction (vph)	0	2	0	0	147	0	0	0	83	0	0	0
Lane Group Flow (vph)	0	2	0	222	82	0	3	838	75	415	1175	0
Conf. Peds. (#/hr)	82						82	77		239	239	77
Conf. Bikes (#/hr)			2			6			9			5
Turn Type	Split			Perm			Perm			Perm custom		
Protected Phases	3	3			4			6				
Permitted Phases				4			6		6	2	2	
Actuated Green, G (s)		1.3		24.2	24.2		34.9	34.9	34.9	34.9	34.9	
Effective Green, g (s)		2.3		25.2	25.2		35.5	35.5	35.5	35.5	35.5	
Actuated g/C Ratio		0.03		0.34	0.34		0.47	0.47	0.47	0.47	0.47	
Clearance Time (s)		5.0		5.0	5.0		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		33		298	291		70	1058	342	132	1057	
v/s Ratio Prot		c0.00			0.10			0.37				
v/s Ratio Perm				c0.25			0.02		0.10	c1.49	0.53	
v/c Ratio		0.06		0.74	0.28		0.04	0.79	0.22	3.14	1.11	
Uniform Delay, d1		35.3		22.1	18.3		10.6	16.6	11.6	19.8	19.8	
Progression Factor		1.00		1.81	5.42		0.92	1.09	1.86	1.00	1.00	
Incremental Delay, d2		0.8		0.9	0.0		0.1	0.6	0.1	984.4	63.6	
Delay (s)		36.1		40.9	99.1		9.8	18.8	21.7	1004.1	83.4	
Level of Service		D		D	F		A	B	C	F	F	
Approach Delay (s)		36.1			70.4			19.2			323.7	
Approach LOS		D			E			B			F	

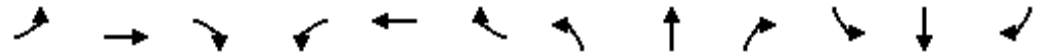
Intersection Summary			
HCM Average Control Delay	185.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.08		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		1.00	0.86		1.00	0.95	1.00	1.00	1.00	0.88
Frbp, ped/bikes	1.00	0.96		1.00	0.98		1.00	1.00	0.68	1.00	1.00	0.79
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00	1.00	0.81	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3831		1111	3912		1118	2235	684	900	1176	1395
Flt Permitted	0.95	1.00		0.06	1.00		0.10	1.00	1.00	0.55	1.00	1.00
Satd. Flow (perm)	2168	3831		75	3912		115	2235	684	523	1176	1395
Volume (vph)	336	2585	206	47	3454	268	317	319	83	405	468	558
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	350	2693	215	49	3598	279	330	332	86	422	488	581
RTOR Reduction (vph)	0	8	0	0	8	0	0	0	0	0	0	0
Lane Group Flow (vph)	350	2900	0	49	3869	0	330	332	86	422	488	581
Conf. Peds. (#/hr)	204		294	294		204	338		235	235		338
Conf. Bikes (#/hr)			4			9			6			5
Turn Type	Prot			Perm			pm+pt		Perm	Perm		pm+ov
Protected Phases	1	6			2		3	8			4	1
Permitted Phases				2			8		8	4		4
Actuated Green, G (s)	25.0	90.0		61.0	61.0		49.2	49.2	49.2	35.2	35.2	60.2
Effective Green, g (s)	25.0	91.0		62.0	62.0		51.0	51.0	51.0	37.0	37.0	62.0
Actuated g/C Ratio	0.17	0.61		0.41	0.41		0.34	0.34	0.34	0.25	0.25	0.41
Clearance Time (s)	4.0	5.0		5.0	5.0		4.0	5.8	5.8	5.8	5.8	4.0
Vehicle Extension (s)	2.0	4.0		4.0	4.0		2.0	3.0	3.0	3.0	3.0	2.0
Lane Grp Cap (vph)	361	2324		31	1617		106	760	233	129	290	614
v/s Ratio Prot	0.16	c0.76			c0.99		c0.21	0.15			0.41	0.16
v/s Ratio Perm				0.65			c0.85		0.13	0.81		0.26
v/c Ratio	0.97	1.25		1.58	2.39		3.11	0.44	0.37	3.27	1.68	0.95
Uniform Delay, d1	62.1	29.5		44.0	44.0		72.2	38.4	37.4	56.5	56.5	42.4
Progression Factor	0.83	1.52		0.52	0.51		1.00	1.00	1.00	0.91	0.91	1.05
Incremental Delay, d2	8.3	111.8		274.8	627.0		975.3	0.4	1.0	1030.5	313.5	12.7
Delay (s)	59.7	156.6		297.5	649.4		1047.5	38.8	38.3	1081.7	364.7	57.1
Level of Service	E	F		F	F		F	D	D	F	F	E
Approach Delay (s)		146.2			645.1			483.8			447.8	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	428.6	HCM Level of Service	F
HCM Volume to Capacity ratio	2.44		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	182.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 95: Sunset Blvd & Veteran Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑		↖		↖		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0			
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00			
Fr _t		0.99		1.00	1.00		1.00		0.85			
Fl _t Protected		1.00		0.95	1.00		0.95		1.00			
Satd. Flow (prot)		3120		1583	3167		1583		1417			
Fl _t Permitted		1.00		0.09	1.00		0.76		1.00			
Satd. Flow (perm)		3120		156	3167		1262		1417			
Volume (vph)	0	1444	156	766	1711	0	382	0	915	0	0	0
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1489	161	790	1764	0	394	0	943	0	0	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	314	0	0	0
Lane Group Flow (vph)	0	1643	0	790	1764	0	394	0	629	0	0	0
Turn Type				pm+pt		custom		Over	Perm			
Protected Phases		2		1	6			1			4	
Permitted Phases				6			8			4		
Actuated Green, G (s)		37.7		82.0	82.0		29.0		40.3			
Effective Green, g (s)		38.7		83.0	83.0		29.0		40.3			
Actuated g/C Ratio		0.32		0.69	0.69		0.24		0.34			
Clearance Time (s)		5.0		4.0	5.0		4.0		4.0			
Vehicle Extension (s)		4.0		3.0	3.0		3.0		3.0			
Lane Grp Cap (vph)		1006		587	2191		305		476			
v/s Ratio Prot		c0.53		c0.45	0.56				0.44			
v/s Ratio Perm				0.48			c0.31					
v/c Ratio		1.63		1.35	0.81		1.29		1.32			
Uniform Delay, d ₁		40.6		42.1	12.9		45.5		39.9			
Progression Factor		1.00		0.96	0.92		1.00		1.00			
Incremental Delay, d ₂		289.6		164.3	2.5		153.6		158.7			
Delay (s)		330.2		204.5	14.4		199.1		198.5			
Level of Service		F		F	B		F		F			
Approach Delay (s)		330.2			73.2			198.7			0.0	
Approach LOS		F			E			F			A	

Intersection Summary

HCM Average Control Delay	180.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	131.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		0.97	0.86		1.00	0.95	1.00	1.00	0.95	0.88
Frbp, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00	0.93	1.00	1.00	0.91
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3909		2168	3928		1118	2235	933	1109	2235	1608
Flt Permitted	0.95	1.00		0.95	1.00		0.09	1.00	1.00	0.14	1.00	1.00
Satd. Flow (perm)	2168	3909		2168	3928		102	2235	933	163	2235	1608
Volume (vph)	289	2914	198	18	3595	661	249	842	271	140	769	1074
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	314	3167	215	20	3908	718	271	915	295	152	836	1167
RTOR Reduction (vph)	0	7	0	0	18	0	0	0	0	0	0	0
Lane Group Flow (vph)	314	3375	0	20	4608	0	271	915	295	152	836	1167
Confl. Peds. (#/hr)	14		134	134		14	71		30	30		71
Confl. Bikes (#/hr)			14			12			27			14
Turn Type	Prot			Prot		pm+pt		pm+ov	Perm		pm+ov	
Protected Phases	5	2		1	6	3		8	1		4	5
Permitted Phases						8		8	4		4	4
Actuated Green, G (s)	21.0	80.5		5.0	64.5	48.1		48.1	53.1		39.1	60.1
Effective Green, g (s)	21.0	82.0		5.0	66.0	51.0		51.0	56.0		42.0	63.0
Actuated g/C Ratio	0.14	0.55		0.03	0.44	0.34		0.34	0.37		0.28	0.42
Clearance Time (s)	4.0	5.5		4.0	5.5	4.0		6.9	4.0		6.9	4.0
Vehicle Extension (s)	1.0	4.0		1.0	4.0	3.0		2.0	1.0		2.0	1.0
Lane Grp Cap (vph)	304	2137		72	1728	69		760	373		46	675
v/s Ratio Prot	0.14	c0.86		0.01	c1.17	c0.13		0.41	0.03		0.37	0.24
v/s Ratio Perm						c1.21		0.29	0.93			0.48
v/c Ratio	1.03	1.58		0.28	2.67	3.93		1.20	0.79		3.30	1.73
Uniform Delay, d1	64.5	34.0		70.7	42.0	46.3		49.5	41.8		54.0	43.5
Progression Factor	0.65	0.33		1.29	0.46	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	24.8	260.9		0.1	750.2	1351.5		104.1	10.2		1090.3	334.2
Delay (s)	66.4	272.1		91.5	769.6	1397.8		153.6	52.0		1144.3	377.7
Level of Service	E	F		F	F	F		F	D		F	F
Approach Delay (s)		254.7			766.7			361.0			368.9	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	487.0	HCM Level of Service	F
HCM Volume to Capacity ratio	2.88		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	196.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			






























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖↖	↑↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.86		0.97	0.81		1.00	0.95		1.00	0.95	
Fr _t	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.98	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	4005		2168	4712		1118	2165		1118	2197	
Fl _t Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1118	4005		2168	4712		1118	2165		1118	2197	
Volume (vph)	120	2497	186	509	3085	244	73	1222	325	283	1036	133
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	125	2601	194	530	3214	254	76	1273	339	295	1079	139
RTOR Reduction (vph)	0	7	0	0	9	0	0	16	0	0	6	0
Lane Group Flow (vph)	125	2788	0	530	3459	0	76	1596	0	295	1212	0
Turn Type	Prot		Prot		Prot		Prot		Prot			
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	12.0	64.1		19.0	71.1		13.0	35.0		12.4	34.4	
Effective Green, g (s)	12.0	65.6		19.0	72.6		13.0	37.0		12.4	36.4	
Actuated g/C Ratio	0.08	0.44		0.13	0.48		0.09	0.25		0.08	0.24	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	1.0	4.0		1.0	4.0		1.0	4.0		1.0	4.0	
Lane Grp Cap (vph)	89	1752		275	2281		97	534		92	533	
v/s Ratio Prot	0.11	c0.70		c0.24	0.73		0.07	c0.74		c0.26	0.55	
v/s Ratio Perm												
v/c Ratio	1.40	1.59		1.93	1.52		0.78	2.99		3.21	2.27	
Uniform Delay, d ₁	69.0	42.2		65.5	38.7		67.1	56.5		68.8	56.8	
Progression Factor	1.04	0.91		0.75	0.57		1.00	1.00		1.00	1.00	
Incremental Delay, d ₂	188.1	266.3		418.5	232.5		30.7	900.1		1020.6	579.2	
Delay (s)	260.2	304.6		467.5	254.6		97.8	956.6		1089.4	636.0	
Level of Service	F	F		F	F		F	F		F	F	
Approach Delay (s)		302.7			282.9			918.0			724.4	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	460.6	HCM Level of Service	F
HCM Volume to Capacity ratio	2.17		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	193.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 98: Olympic Blvd & Sepulveda Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	4497		1583	4550	1417	1583	3167	1417	1583	3126	
Flt Permitted	0.12	1.00		0.95	1.00	1.00	0.11	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	207	4497		1583	4550	1417	185	3167	1417	185	3126	
Volume (vph)	120	2126	179	144	3119	188	62	1511	115	85	1169	109
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	122	2169	183	147	3183	192	63	1542	117	87	1193	111
RTOR Reduction (vph)	0	11	0	0	0	2	0	0	29	0	0	0
Lane Group Flow (vph)	122	2341	0	147	3183	190	63	1542	88	87	1304	0
Turn Type	Perm			Prot		Perm	Perm		Perm	Perm		
Protected Phases		8		7	4			6			2	
Permitted Phases	8					4	6		6	2		
Actuated Green, G (s)	31.2	31.2		10.3	45.0	45.0	35.0	35.0	35.0	35.0	35.0	
Effective Green, g (s)	32.2	32.2		9.8	46.0	46.0	36.0	36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.36	0.36		0.11	0.51	0.51	0.40	0.40	0.40	0.40	0.40	
Clearance Time (s)	5.0	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	74	1609		172	2326	724	74	1267	567	74	1250	
v/s Ratio Prot		0.52		0.09	c0.70			c0.49			0.42	
v/s Ratio Perm	c0.59					0.13	0.34		0.06	0.47		
v/c Ratio	1.65	1.45		0.85	1.37	0.26	0.85	1.22	0.16	1.18	1.04	
Uniform Delay, d1	28.9	28.9		39.4	22.0	12.4	24.6	27.0	17.3	27.0	27.0	
Progression Factor	0.79	0.77		1.08	0.55	0.21	0.96	0.91	1.14	1.00	1.00	
Incremental Delay, d2	334.7	207.5		4.0	166.1	0.1	10.8	98.4	0.1	159.7	37.5	
Delay (s)	357.6	229.9		46.5	178.1	2.7	34.5	122.9	19.8	186.7	64.5	
Level of Service	F	F		D	F	A	C	F	B	F	E	
Approach Delay (s)		236.2			163.0			112.7			72.1	
Approach LOS		F			F			F			E	
Intersection Summary												
HCM Average Control Delay		159.5										F
HCM Volume to Capacity ratio		1.44										
Actuated Cycle Length (s)		90.0							12.0			
Intersection Capacity Utilization		144.0%										H
Analysis Period (min)		15										
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑↑		↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	4500		1583	3122		1583	3167	1417
Flt Permitted	0.18	1.00	1.00	0.15	1.00		0.95	1.00		0.11	1.00	1.00
Satd. Flow (perm)	303	4550	1417	256	4500		1583	3122		185	3167	1417
Volume (vph)	100	1808	242	222	2041	161	265	1589	166	125	1429	113
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	101	1826	244	224	2062	163	268	1605	168	126	1443	114
RTOR Reduction (vph)	0	0	10	0	10	0	0	9	0	0	0	11
Lane Group Flow (vph)	101	1826	235	224	2215	0	268	1764	0	126	1443	103
Turn Type	Perm		pm+ov	pm+pt			Prot			Perm		Perm
Protected Phases		6	3	5	2		3	8			4	
Permitted Phases	6		6	2						4		4
Actuated Green, G (s)	20.5	20.5	32.0	29.5	29.5		11.5	50.5		35.5	35.5	35.5
Effective Green, g (s)	22.0	22.0	33.0	31.0	31.0		11.0	51.0		36.0	36.0	36.0
Actuated g/C Ratio	0.24	0.24	0.37	0.34	0.34		0.12	0.57		0.40	0.40	0.40
Clearance Time (s)	5.5	5.5	3.5	3.0	5.5		3.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	2.0	3.0	3.0		2.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	1112	583	162	1550		193	1769		74	1267	567
v/s Ratio Prot		c0.40	0.05	0.08	c0.49		c0.17	0.57			0.46	
v/s Ratio Perm	0.33		0.12	0.40						c0.68		0.07
v/c Ratio	1.36	1.64	0.40	1.38	1.43		1.39	1.00		1.70	1.14	0.18
Uniform Delay, d1	34.0	34.0	21.2	44.7	29.5		39.5	19.4		27.0	27.0	17.5
Progression Factor	1.00	1.00	1.00	1.64	1.52		1.00	1.00		1.44	1.45	1.59
Incremental Delay, d2	229.3	293.0	0.2	175.8	193.5		203.5	20.8		332.0	65.6	0.2
Delay (s)	263.3	327.0	21.3	248.9	238.2		243.0	40.2		371.0	104.9	27.9
Level of Service	F	F	C	F	F		F	D		F	F	C
Approach Delay (s)		289.7			239.2			66.8			119.6	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	186.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	133.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↘		↘	↗↘	↗	↘	↗↘	↗	↗↘	↗↘	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	0.86	0.86	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (prot)	1303	3742		1304	3747	1129	1304	2608	1137	2243	2287	
Flt Permitted	0.07	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (perm)	93	3742		1304	3747	1129	1304	2608	1137	2243	2287	
Volume (vph)	22	1555	10	45	1763	1268	140	312	254	999	238	7
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	22	1587	10	46	1799	1294	143	318	259	1019	243	7
RTOR Reduction (vph)	0	1	0	0	0	353	0	0	0	0	1	0
Lane Group Flow (vph)	22	1596	0	46	1799	941	143	318	259	679	589	0
Conf. Peds. (#/hr)	11		9	9		11	58		11	11		58
Conf. Bikes (#/hr)			6			8			10			4
Turn Type	Perm			Prot		Perm	Split		pm+ov	Split		
Protected Phases		6		5	2		3	3	5	4	4	
Permitted Phases	6					2			3			
Actuated Green, G (s)	59.5	59.5		10.0	73.5	73.5	21.5	21.5	31.5	40.0	40.0	
Effective Green, g (s)	60.5	60.5		10.0	74.5	74.5	22.5	22.5	32.5	41.0	41.0	
Actuated g/C Ratio	0.40	0.40		0.07	0.50	0.50	0.15	0.15	0.22	0.27	0.27	
Clearance Time (s)	5.0	5.0		4.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0		2.0	4.0	4.0	2.0	2.0	2.0	4.0	4.0	
Lane Grp Cap (vph)	38	1509		87	1861	561	196	391	246	613	625	
v/s Ratio Prot		0.43		0.04	0.48		0.11	0.12	c0.07	c0.30	0.26	
v/s Ratio Perm	0.24					c0.83			0.16			
v/c Ratio	0.58	1.06		0.53	0.97	1.68	0.73	0.81	1.05	1.11	1.05dl	
Uniform Delay, d1	34.8	44.8		67.7	36.5	37.8	60.8	61.7	58.8	54.5	53.4	
Progression Factor	1.68	1.68		1.19	0.96	3.85	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	40.5	37.5		0.2	2.2	305.3	10.9	11.6	72.0	69.5	23.0	
Delay (s)	98.9	112.7		80.5	37.1	450.6	71.8	73.3	130.7	124.0	76.3	
Level of Service	F	F		F	D	F	E	E	F	F	E	
Approach Delay (s)		112.5			208.2			93.7			101.8	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	153.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	146.6%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑	↗		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	0.98		1.00	1.00	0.85		0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.99	
Satd. Flow (prot)	1583	4479		1583	3167	1417		1655			3112	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.92			0.56	
Satd. Flow (perm)	1583	4479		1583	3167	1417		1520			1763	
Volume (vph)	159	966	113	90	1131	150	10	898	47	197	570	28
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	167	1017	119	95	1191	158	11	945	49	207	600	29
RTOR Reduction (vph)	0	13	0	0	0	91	0	1	0	0	3	0
Lane Group Flow (vph)	167	1123	0	95	1191	67	0	1004	0	0	833	0
Turn Type	Prot			Prot		Perm	Prot				Prot	
Protected Phases	1	6		5	2		3	8			7	4
Permitted Phases						2						
Actuated Green, G (s)	12.8	42.4		8.3	37.9	37.9		27.0			27.0	
Effective Green, g (s)	12.8	42.7		8.3	38.2	38.2		27.0			27.0	
Actuated g/C Ratio	0.14	0.47		0.09	0.42	0.42		0.30			0.30	
Clearance Time (s)	4.0	4.3		4.0	4.3	4.3		4.0			4.0	
Vehicle Extension (s)	3.0	5.7		3.0	5.5	5.5		3.0			3.0	
Lane Grp Cap (vph)	225	2125		146	1344	601		456			529	
v/s Ratio Prot	c0.11	0.25		0.06	c0.38							
v/s Ratio Perm						0.05		c0.66			0.47	
v/c Ratio	0.74	0.53		0.65	0.89	0.11		2.20			51.75dl	
Uniform Delay, d1	37.0	16.6		39.5	23.9	15.6		31.5			31.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	12.4	0.9		9.9	8.9	0.4		547.5			267.8	
Delay (s)	49.4	17.5		49.4	32.8	16.0		579.0			299.3	
Level of Service	D	B		D	C	B		F			F	
Approach Delay (s)		21.6			32.0			579.0			299.3	
Approach LOS		C			C			F			F	

Intersection Summary

HCM Average Control Delay	197.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	139.7%	ICU Level of Service	H
Analysis Period (min)	15		
dl	Defacto Left Lane. Recode with 1 though lane as a left lane.		
dr	Defacto Right Lane. Recode with 1 though lane as a right lane.		
c	Critical Lane Group		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑	↗	↗	↑↑	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.87	1.00	0.96	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		0.95	1.00	1.00	0.92	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	3724		1295	3740		1238	2608	1013	1194	2454	
Flt Permitted	0.07	1.00		0.11	1.00		0.20	1.00	1.00	0.58	1.00	
Satd. Flow (perm)	98	3724		153	3740		254	2608	1013	726	2454	
Volume (vph)	618	1518	34	75	1839	10	88	203	3	37	554	97
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	644	1581	35	78	1916	10	92	211	3	39	577	101
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	2	0	9	0
Lane Group Flow (vph)	644	1615	0	78	1926	0	92	211	1	39	669	0
Conf. Peds. (#/hr)	63		61	61		63	79		72	72		79
Conf. Bikes (#/hr)			9			13			4			9
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		6			2			8				4
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	97.5	97.5		97.5	97.5		44.0	44.0	44.0	44.0	44.0	
Effective Green, g (s)	98.0	98.0		98.0	98.0		44.0	44.0	44.0	44.0	44.0	
Actuated g/C Ratio	0.65	0.65		0.65	0.65		0.29	0.29	0.29	0.29	0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	64	2433		100	2443		75	765	297	213	720	
v/s Ratio Prot		0.43			0.51			0.08			0.27	
v/s Ratio Perm	c6.54			0.51			c0.36		0.00	0.05		
v/c Ratio	10.06	0.66		0.78	0.79		1.23	0.28	0.00	0.18	0.93	
Uniform Delay, d1	26.0	15.9		18.4	18.6		53.0	40.8	37.5	39.6	51.5	
Progression Factor	1.00	1.00		1.65	1.80		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4109.1	1.4		19.8	1.0		176.9	0.9	0.0	1.9	20.1	
Delay (s)	4135.1	17.4		50.2	34.4		229.9	41.6	37.5	41.5	71.6	
Level of Service	F	B		D	C		F	D	D	D	E	
Approach Delay (s)		1190.7			35.1			98.2			69.9	
Approach LOS		F			D			F			E	

Intersection Summary

HCM Average Control Delay	537.4	HCM Level of Service	F
HCM Volume to Capacity ratio	7.32		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	142.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.98			0.99		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1621			1645		1583	1664		1583	1667	1417
Flt Permitted		0.94			0.93		0.27	1.00		0.36	1.00	1.00
Satd. Flow (perm)		1534			1533		452	1664		601	1667	1417
Volume (vph)	66	458	104	19	222	18	93	497	5	93	614	77
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	69	477	108	20	231	19	97	518	5	97	640	80
RTOR Reduction (vph)	0	12	0	0	5	0	0	0	0	0	0	37
Lane Group Flow (vph)	0	642	0	0	265	0	97	523	0	97	640	43
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		6
Actuated Green, G (s)		19.5			19.5		31.7	31.7		31.7	31.7	31.7
Effective Green, g (s)		20.0			20.0		32.0	32.0		32.0	32.0	32.0
Actuated g/C Ratio		0.33			0.33		0.53	0.53		0.53	0.53	0.53
Clearance Time (s)		4.5			4.5		4.3	4.3		4.3	4.3	4.3
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		511			511		241	887		321	889	756
v/s Ratio Prot							0.31			c0.38		
v/s Ratio Perm		c0.42			0.17		0.21			0.16		0.03
v/c Ratio		1.26			0.52		0.40	0.59		0.30	0.72	0.06
Uniform Delay, d1		20.0			16.1		8.3	9.5		7.8	10.6	6.7
Progression Factor		1.00			1.00		1.08	0.97		1.00	1.00	1.00
Incremental Delay, d2		130.6			0.9		2.0	1.2		2.4	5.0	0.1
Delay (s)		150.6			17.0		11.0	10.5		10.2	15.6	6.9
Level of Service		F			B		B	B		B	B	A
Approach Delay (s)		150.6			17.0		10.5			14.1		
Approach LOS		F			B		B			B		

Intersection Summary

HCM Average Control Delay	51.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	109.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖		↖	↖↖↖		↖	↑	↖	↖	↖	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	3700		1304	3719		1304	1373	1167	1304	1369	
Flt Permitted	0.17	1.00		0.17	1.00		0.28	1.00	1.00	0.28	1.00	
Satd. Flow (perm)	239	3700		239	3719		379	1373	1167	380	1369	
Volume (vph)	36	1635	150	117	1685	87	98	573	46	104	564	10
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	37	1668	153	119	1719	89	100	585	47	106	576	10
RTOR Reduction (vph)	0	18	0	0	9	0	0	0	1	0	1	0
Lane Group Flow (vph)	37	1803	0	119	1799	0	100	585	46	106	585	0
Turn Type	Perm			Perm			Perm			Perm	Perm	
Protected Phases	2			2			4			4	4	
Permitted Phases	2			2			4			4	4	
Actuated Green, G (s)	22.4	22.4		22.4	22.4		28.0	28.0	28.0	28.0	28.0	
Effective Green, g (s)	23.0	23.0		23.0	23.0		29.0	29.0	29.0	29.0	29.0	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.48	0.48	0.48	0.48	0.48	
Clearance Time (s)	4.6	4.6		4.6	4.6		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)	92	1418		92	1426		183	664	564	184	662	
v/s Ratio Prot		0.49			0.48			0.43			c0.43	
v/s Ratio Perm	0.16			c0.50			0.26		0.04	0.28		
v/c Ratio	0.40	1.27		1.29	1.26		0.55	0.88	0.08	0.58	0.88	
Uniform Delay, d1	13.5	18.5		18.5	18.5		10.9	13.9	8.3	11.1	14.0	
Progression Factor	1.00	1.00		1.48	1.50		1.00	1.00	1.00	0.58	0.68	
Incremental Delay, d2	12.6	127.9		175.1	121.5		11.2	15.6	0.3	7.5	10.2	
Delay (s)	26.1	146.4		202.4	149.3		22.1	29.5	8.6	14.0	19.6	
Level of Service	C	F		F	F		C	C	A	B	B	
Approach Delay (s)		144.0			152.6			27.2			18.8	
Approach LOS		F			F			C			B	

Intersection Summary

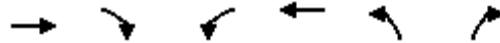
HCM Average Control Delay	114.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	131.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕↕		↖	↕↕↕↕	↖	↖	↕↕		↖	↕↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.86	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4459		1583	5733	1417	1583	3079		1583	3167	1417
Flt Permitted	0.10	1.00		0.10	1.00	1.00	0.12	1.00		0.14	1.00	1.00
Satd. Flow (perm)	167	4459		167	5733	1417	208	3079		232	3167	1417
Volume (vph)	117	1328	204	200	1920	271	138	725	164	215	1246	62
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	122	1383	212	208	2000	282	144	755	171	224	1298	65
RTOR Reduction (vph)	0	23	0	0	0	31	0	16	0	0	0	19
Lane Group Flow (vph)	122	1572	0	208	2000	251	144	910	0	224	1298	46
Turn Type	Perm			Perm		pm+ov	pm+pt			pm+pt		Perm
Protected Phases		6			2	7	3	8		7	4	
Permitted Phases	6			2		2	8			4		4
Actuated Green, G (s)	39.0	39.0		39.0	39.0	45.0	36.1	30.1		36.1	30.1	30.1
Effective Green, g (s)	40.0	40.0		40.0	40.0	46.0	38.0	32.0		38.0	32.0	32.0
Actuated g/C Ratio	0.44	0.44		0.44	0.44	0.51	0.42	0.36		0.42	0.36	0.36
Clearance Time (s)	5.0	5.0		5.0	5.0	4.0	4.0	5.9		4.0	5.9	5.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	1982		74	2548	787	179	1095		188	1126	504
v/s Ratio Prot		0.35			0.35	0.02	0.05	0.30		c0.08	0.41	
v/s Ratio Perm	0.73			c1.25		0.16	0.28			c0.42		0.03
v/c Ratio	1.65	0.79		2.81	0.78	0.32	0.80	0.83		1.19	1.15	0.09
Uniform Delay, d1	25.0	21.5		25.0	21.3	12.8	22.1	26.5		22.2	29.0	19.3
Progression Factor	1.00	1.00		1.05	1.02	1.51	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	344.3	3.4		818.2	0.2	0.0	22.4	7.4		126.7	79.2	0.4
Delay (s)	369.3	24.8		844.4	22.1	19.4	44.5	33.9		148.9	108.2	19.7
Level of Service	F	C		F	C	B	D	C		F	F	B
Approach Delay (s)		49.3			90.5			35.3			110.3	
Approach LOS		D			F			D			F	

Intersection Summary

HCM Average Control Delay	76.2	HCM Level of Service	E
HCM Volume to Capacity ratio	2.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	0.99		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3696		1304	3747	1282	
Flt Permitted	1.00		0.07	1.00	0.96	
Satd. Flow (perm)	3696		97	3747	1282	
Volume (vph)	1977	197	68	1921	233	64
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	2059	205	71	2001	243	67
RTOR Reduction (vph)	11	0	0	0	4	0
Lane Group Flow (vph)	2253	0	71	2001	306	0
Turn Type			Perm			
Protected Phases	6			2	4	
Permitted Phases			2			
Actuated Green, G (s)	56.5		56.5	56.5	24.7	
Effective Green, g (s)	56.6		56.6	56.6	25.4	
Actuated g/C Ratio	0.63		0.63	0.63	0.28	
Clearance Time (s)	4.1		4.1	4.1	4.7	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2324		61	2356	362	
v/s Ratio Prot	0.61			0.53	c0.24	
v/s Ratio Perm			c0.73			
v/c Ratio	0.97		1.16	0.85	0.84	
Uniform Delay, d1	15.9		16.7	13.3	30.4	
Progression Factor	0.48		1.00	1.00	1.00	
Incremental Delay, d2	9.6		166.6	4.1	16.3	
Delay (s)	17.2		183.3	17.4	46.7	
Level of Service	B		F	B	D	
Approach Delay (s)	17.2			23.1	46.7	
Approach LOS	B			C	D	
Intersection Summary						
HCM Average Control Delay			21.8		HCM Level of Service	C
HCM Volume to Capacity ratio			1.07			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			98.9%		ICU Level of Service	F
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99			0.94			1.00	0.94
Flpb, ped/bikes	0.99	1.00		1.00	1.00			0.99			0.98	1.00
Frt	1.00	1.00		1.00	1.00			0.91			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.97	1.00
Satd. Flow (prot)	1291	3723		1300	3697			1155			1305	1095
Flt Permitted	0.07	1.00		0.07	1.00			0.94			0.78	1.00
Satd. Flow (perm)	91	3723		95	3697			1095			1038	1095
Volume (vph)	49	1892	47	84	1911	58	33	26	126	40	36	45
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	51	1971	49	88	1991	60	34	27	131	42	38	47
RTOR Reduction (vph)	0	2	0	0	2	0	0	6	0	0	0	4
Lane Group Flow (vph)	51	2018	0	88	2049	0	0	186	0	0	80	43
Conf. Peds. (#/hr)	123		38	38		123	46		63	63		46
Conf. Bikes (#/hr)			7			9						1
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	62.2	62.2		62.2	62.2			19.8			19.8	19.8
Effective Green, g (s)	62.2	62.2		62.2	62.2			19.8			19.8	19.8
Actuated g/C Ratio	0.69	0.69		0.69	0.69			0.22			0.22	0.22
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	63	2573		66	2555			241			228	241
v/s Ratio Prot		0.54			0.55							
v/s Ratio Perm	0.56			c0.92				c0.17			0.08	0.04
v/c Ratio	0.81	0.78		1.33	0.80			0.77			0.35	0.18
Uniform Delay, d1	9.7	9.4		13.9	9.6			33.0			29.7	28.5
Progression Factor	2.60	2.94		0.73	0.66			1.00			1.00	1.00
Incremental Delay, d2	9.8	0.2		192.4	1.4			14.1			0.9	0.4
Delay (s)	35.1	27.8		202.6	7.8			47.1			30.6	28.9
Level of Service	D	C		F	A			D			C	C
Approach Delay (s)		27.9			15.8			47.1			30.0	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↓
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (prot)	3167	1417	1583	3167	3011	
Flt Permitted	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (perm)	3167	1417	1583	3167	3011	
Volume (vph)	1360	859	95	1565	507	138
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1432	904	100	1647	534	145
RTOR Reduction (vph)	0	76	0	0	28	0
Lane Group Flow (vph)	1432	828	100	1647	651	0
Turn Type		pt+ov	Prot			
Protected Phases	2	2 4	1	6	4	
Permitted Phases						
Actuated Green, G (s)	40.6	73.9	9.0	37.1	29.4	
Effective Green, g (s)	40.5	73.5	8.5	37.0	29.0	
Actuated g/C Ratio	0.45	0.82	0.09	0.41	0.32	
Clearance Time (s)	3.9		3.5	3.9	3.6	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1425	1157	150	1302	970	
v/s Ratio Prot	c0.45	c0.58	c0.06	c0.52	0.22	
v/s Ratio Perm						
v/c Ratio	1.00	0.72	0.67	1.26	0.67	
Uniform Delay, d1	24.8	3.6	39.4	26.5	26.4	
Progression Factor	0.84	0.96	1.00	1.00	1.00	
Incremental Delay, d2	19.9	1.3	10.7	125.5	1.8	
Delay (s)	40.7	4.8	50.0	152.0	28.2	
Level of Service	D	A	D	F	C	
Approach Delay (s)	26.8			146.2	28.2	
Approach LOS	C			F	C	

Intersection Summary

HCM Average Control Delay	70.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑		↙	↑↑↑		↙	↑↑		↙	↑↑	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.98		1.00	1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	3708		1304	3621		1302	2583		1304	2507	
Flt Permitted	0.12	1.00		0.12	1.00		0.13	1.00		0.14	1.00	
Satd. Flow (perm)	171	3708		171	3621		185	2583		197	2507	
Volume (vph)	120	1858	59	130	1546	106	211	1162	40	104	768	126
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	124	1915	61	134	1594	109	218	1198	41	107	792	130
RTOR Reduction (vph)	0	4	0	0	8	0	0	3	0	0	15	0
Lane Group Flow (vph)	124	1972	0	134	1695	0	218	1236	0	107	907	0
Conf. Peds. (#/hr)	144		116	116		144	97		104	104		97
Conf. Bikes (#/hr)			5			11			3			7
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	36.2	31.2		36.2	31.2		37.7	28.7		33.9	26.8	
Effective Green, g (s)	37.2	32.2		37.2	32.2		38.7	29.7		34.9	27.8	
Actuated g/C Ratio	0.41	0.36		0.41	0.36		0.43	0.33		0.39	0.31	
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	134	1327		134	1296		191	852		164	774	
v/s Ratio Prot	0.05	c0.53		c0.06	0.47		c0.11	c0.48		0.05	0.36	
v/s Ratio Perm	0.33			0.36			0.38			0.20		
v/c Ratio	0.93	1.49		1.00	1.31		1.14	1.45		0.65	1.17	
Uniform Delay, d1	23.4	28.9		44.7	28.9		21.3	30.1		22.7	31.1	
Progression Factor	1.22	0.97		1.27	0.73		1.37	1.35		1.00	1.00	
Incremental Delay, d2	27.2	220.2		59.7	141.8		80.0	204.8		9.0	91.1	
Delay (s)	55.8	248.1		116.6	163.0		109.2	245.6		31.6	122.2	
Level of Service	E	F		F	F		F	F		C	F	
Approach Delay (s)		236.7			159.7			225.2			112.8	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	192.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	127.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frbp, ped/bikes		0.98			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.98			0.99			0.99	
Flt Protected		1.00			0.99			1.00			1.00	
Satd. Flow (prot)		1540			1615			3132			3117	
Flt Permitted		0.94			0.75			0.79			0.78	
Satd. Flow (perm)		1456			1218			2484			2445	
Volume (vph)	31	213	162	48	223	36	45	1235	50	43	1169	70
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	35	242	184	55	253	41	51	1403	57	49	1328	80
RTOR Reduction (vph)	0	26	0	0	5	0	0	3	0	0	5	0
Lane Group Flow (vph)	0	435	0	0	344	0	0	1508	0	0	1452	0
Conf. Peds. (#/hr)	28		18	18		28	29		26	26		29
Conf. Bikes (#/hr)			4			2			1			6
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			55.6			55.6	
Effective Green, g (s)		26.0			26.0			56.0			56.0	
Actuated g/C Ratio		0.29			0.29			0.62			0.62	
Clearance Time (s)		4.0			4.0			4.4			4.4	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		421			352			1546			1521	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			0.28			c0.61			0.59	
v/c Ratio		1.03			0.98			0.98			0.95	
Uniform Delay, d1		32.0			31.7			16.3			15.8	
Progression Factor		1.00			1.00			1.00			1.02	
Incremental Delay, d2		52.5			41.5			17.7			9.6	
Delay (s)		84.5			73.2			34.1			25.8	
Level of Service		F			E			C			C	
Approach Delay (s)		84.5			73.2			34.1			25.8	
Approach LOS		F			E			C			C	
Intersection Summary												
HCM Average Control Delay			40.6				HCM Level of Service				D	
HCM Volume to Capacity ratio			0.99									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			115.0%				ICU Level of Service				H	
Analysis Period (min)			15									
c Critical Lane Group												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			  			 			 	 
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00		0.91		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85		0.98		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	2608	1167		3685		1304	2608	1167	1304	2604	
Flt Permitted	0.08	1.00	1.00		1.00		0.20	1.00	1.00	0.12	1.00	
Satd. Flow (perm)	106	2608	1167		3685		281	2608	1167	158	2604	
Volume (vph)	69	1345	213	0	1331	167	59	1205	192	199	923	10
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	70	1372	217	0	1358	170	60	1230	196	203	942	10
RTOR Reduction (vph)	0	0	50	0	13	0	0	0	7	0	1	0
Lane Group Flow (vph)	70	1372	167	0	1515	0	60	1230	189	203	952	0
Turn Type	Perm		Perm				Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4				2		2		6	
Actuated Green, G (s)	51.0	51.0	51.0		51.0		59.0	59.0	59.0	59.0	59.0	
Effective Green, g (s)	52.0	52.0	52.0		52.0		60.0	60.0	60.0	60.0	60.0	
Actuated g/C Ratio	0.43	0.43	0.43		0.43		0.50	0.50	0.50	0.50	0.50	
Clearance Time (s)	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	46	1130	506		1597		141	1304	584	79	1302	
v/s Ratio Prot		0.53			0.41			0.47			0.37	
v/s Ratio Perm	c0.66		0.14				0.21		0.16	c1.29		
v/c Ratio	1.52	1.21	0.33		0.95		0.43	0.94	0.32	2.57	0.73	
Uniform Delay, d1	34.0	34.0	22.5		32.7		19.1	28.4	17.9	30.0	23.6	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	318.8	104.7	1.7		13.2		9.1	14.6	1.5	741.8	3.6	
Delay (s)	352.8	138.7	24.2		46.0		28.2	43.0	19.4	771.8	27.3	
Level of Service	F	F	C		D		C	D	B	F	C	
Approach Delay (s)		132.7			46.0			39.3			158.1	
Approach LOS		F			D			D			F	
Intersection Summary												
HCM Average Control Delay			91.2				HCM Level of Service				F	
HCM Volume to Capacity ratio			2.08									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			131.8%				ICU Level of Service			H		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘↗	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	3072	4550	1417	1583	3167	1417	1583	3167	1417
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1583	4550	1417	3072	4550	1417	1583	3167	1417	1583	3167	1417
Volume (vph)	235	1671	603	218	1543	242	308	1573	253	76	949	129
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	245	1741	628	227	1607	252	321	1639	264	79	989	134
RTOR Reduction (vph)	0	0	17	0	0	141	0	0	60	0	0	3
Lane Group Flow (vph)	245	1741	611	227	1607	111	321	1639	204	79	989	131
Turn Type	Prot	pm+ov		Prot	Perm		Prot	pm+ov		Prot	pm+ov	
Protected Phases	3	8	1	7	4		1	6	7	5	2	3
Permitted Phases		8			4			6			2	
Actuated Green, G (s)	13.0	37.7	50.7	12.3	37.0	37.0	13.0	40.7	53.0	9.3	37.0	50.0
Effective Green, g (s)	13.0	39.7	52.7	12.3	39.0	39.0	13.0	42.7	55.0	9.3	39.0	52.0
Actuated g/C Ratio	0.11	0.33	0.44	0.10	0.32	0.32	0.11	0.36	0.46	0.08	0.32	0.43
Clearance Time (s)	4.0	6.0	4.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0
Vehicle Extension (s)	3.0	4.7	3.0	3.0	5.0	5.0	3.0	4.5	3.0	3.0	4.6	3.0
Lane Grp Cap (vph)	171	1505	670	315	1479	461	171	1127	697	123	1029	661
v/s Ratio Prot	c0.15	c0.38	0.10	0.07	0.35		c0.20	c0.52	0.03	0.05	0.31	0.02
v/s Ratio Perm			0.33			0.08			0.11			0.07
v/c Ratio	1.43	1.16	0.91	0.72	1.09	0.24	1.88	1.45	0.29	0.64	0.96	0.20
Uniform Delay, d1	53.5	40.1	31.5	52.2	40.5	29.7	53.5	38.6	20.3	53.7	39.8	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.16	0.74	0.39	1.00	1.00	1.00
Incremental Delay, d2	224.9	78.5	16.8	7.9	50.7	0.6	412.4	208.5	0.2	10.9	20.1	0.1
Delay (s)	278.4	118.6	48.3	60.1	91.2	30.2	474.7	237.3	8.1	64.7	59.9	21.2
Level of Service	F	F	D	E	F	C	F	F	A	E	E	C
Approach Delay (s)		116.7			80.4			244.3			55.9	
Approach LOS		F			F			F			E	

Intersection Summary

HCM Average Control Delay	133.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	3066		1583	3085		1583	4453		1583	3167	1417
Flt Permitted	0.09	1.00		0.07	1.00		0.12	1.00		0.12	1.00	1.00
Satd. Flow (perm)	153	3066		123	3085		196	4453		196	3167	1417
Volume (vph)	143	1398	374	172	989	204	317	1020	169	220	1347	142
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	146	1427	382	176	1009	208	323	1041	172	224	1374	145
RTOR Reduction (vph)	0	20	0	0	14	0	0	19	0	0	0	32
Lane Group Flow (vph)	146	1789	0	176	1203	0	323	1194	0	224	1374	113
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt		pm+pt		pm+ov	
Protected Phases	1	6		5	2		3	8		7	4	1
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	61.5	53.0		61.5	53.0		41.5	33.0		41.5	33.0	41.5
Effective Green, g (s)	62.0	54.0		62.0	54.0		42.0	34.0		42.0	34.0	42.0
Actuated g/C Ratio	0.52	0.45		0.52	0.45		0.35	0.28		0.35	0.28	0.35
Clearance Time (s)	3.5	5.0		3.5	5.0		3.5	5.0		3.5	5.0	3.5
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	4.3		3.0	4.6	3.0
Lane Grp Cap (vph)	174	1380		161	1388		161	1262		161	897	543
v/s Ratio Prot	0.06	c0.58		c0.07	0.39		c0.13	0.27		0.09	0.43	0.01
v/s Ratio Perm	0.38			0.49			c0.57			0.39		0.07
v/c Ratio	0.84	1.30		1.09	0.87		2.01	0.95		1.39	1.53	0.21
Uniform Delay, d1	22.5	33.0		58.2	29.8		58.2	42.1		33.4	43.0	27.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.26	1.18	1.68
Incremental Delay, d2	28.2	138.7		98.0	7.5		474.1	14.5		190.3	241.5	0.1
Delay (s)	50.8	171.7		156.2	37.2		532.3	56.6		232.4	292.1	45.9
Level of Service	D	F		F	D		F	E		F	F	D
Approach Delay (s)		162.7			52.3			156.6			263.9	
Approach LOS		F			D			F			F	

Intersection Summary

HCM Average Control Delay	164.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	141.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	↵
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	2594		1304	2608	1304	1167
Flt Permitted	1.00		0.07	1.00	0.95	1.00
Satd. Flow (perm)	2594		95	2608	1304	1167
Volume (vph)	1677	62	94	1682	161	224
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1711	63	96	1716	164	229
RTOR Reduction (vph)	2	0	0	0	0	14
Lane Group Flow (vph)	1772	0	96	1716	164	215
Turn Type			Perm			Perm
Protected Phases	5			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	57.9		57.9	57.9	24.1	24.1
Effective Green, g (s)	57.9		57.9	57.9	24.1	24.1
Actuated g/C Ratio	0.64		0.64	0.64	0.27	0.27
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	4.0		4.0	4.0	3.0	3.0
Lane Grp Cap (vph)	1669		61	1678	349	312
v/s Ratio Prot	0.68			0.66	0.13	
v/s Ratio Perm			c1.01			c0.18
v/c Ratio	1.06		1.57	1.02	0.47	0.69
Uniform Delay, d1	16.1		16.1	16.1	27.6	29.6
Progression Factor	1.38		1.78	1.84	1.00	1.00
Incremental Delay, d2	31.5		265.3	13.5	1.0	6.2
Delay (s)	53.7		293.9	43.0	28.6	35.8
Level of Service	D		F	D	C	D
Approach Delay (s)	53.7			56.3	32.8	
Approach LOS	D			E	C	

Intersection Summary

HCM Average Control Delay	52.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.96			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1583	3164		1583	3153			1603			1620	
Flt Permitted	0.14	1.00		0.14	1.00			0.99			0.90	
Satd. Flow (perm)	235	3164		226	3153			1585			1469	
Volume (vph)	184	1786	10	48	1103	32	13	326	127	41	209	46
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	192	1860	10	50	1149	33	14	340	132	43	218	48
RTOR Reduction (vph)	0	1	0	0	3	0	0	1	0	0	13	0
Lane Group Flow (vph)	192	1869	0	50	1179	0	0	485	0	0	296	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	6		2		2		8		8		4	
Permitted Phases	6		2		2		8		8		4	
Actuated Green, G (s)	29.2	29.2		29.2	29.2			21.6			21.6	
Effective Green, g (s)	29.5	29.5		29.5	29.5			22.5			22.5	
Actuated g/C Ratio	0.49	0.49		0.49	0.49			0.38			0.38	
Clearance Time (s)	4.3	4.3		4.3	4.3			4.9			4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	116	1556		111	1550			594			551	
v/s Ratio Prot		0.59			0.37							
v/s Ratio Perm	c0.82			0.22				c0.31			0.20	
v/c Ratio	1.66	1.20		0.45	0.76			0.82			0.54	
Uniform Delay, d1	15.2	15.2		10.0	12.4			16.9			14.7	
Progression Factor	1.72	1.79		1.00	1.00			1.00			1.00	
Incremental Delay, d2	298.3	91.3		12.6	3.6			8.5			1.0	
Delay (s)	324.6	118.7		22.6	16.0			25.4			15.7	
Level of Service	F	F		C	B			C			B	
Approach Delay (s)		137.8			16.2			25.4			15.7	
Approach LOS		F			B			C			B	

Intersection Summary

HCM Average Control Delay	78.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	112.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)					4.0			4.0		4.0	4.0	
Lane Util. Factor					1.00			0.95		1.00	0.95	
Frbp, ped/bikes					1.00			0.99		1.00	1.00	
Flpb, ped/bikes					0.99			1.00		1.00	1.00	
Frt					0.92			1.00		1.00	1.00	
Flt Protected					0.98			1.00		0.95	1.00	
Satd. Flow (prot)					1485			3129		1583	3167	
Flt Permitted					0.87			1.00		0.06	1.00	
Satd. Flow (perm)					1321			3129		108	3167	
Volume (vph)	0	0	0	92	0	130	0	1871	64	128	1521	0
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	0	0	0	106	0	149	0	2151	74	147	1748	0
RTOR Reduction (vph)	0	0	0	0	5	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	250	0	0	2223	0	147	1748	0
Conf. Peds. (#/hr)			20	20			47		58	58		47
Conf. Bikes (#/hr)			1						7			1
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)					29.5			62.0		62.0	62.0	
Effective Green, g (s)					30.0			62.0		62.0	62.0	
Actuated g/C Ratio					0.30			0.62		0.62	0.62	
Clearance Time (s)					4.5			4.0		4.0	4.0	
Vehicle Extension (s)					3.0			5.0		5.0	5.0	
Lane Grp Cap (vph)					396			1940		67	1964	
v/s Ratio Prot								0.71			0.55	
v/s Ratio Perm					c0.19					c1.37		
v/c Ratio					0.63			1.15		2.19	0.89	
Uniform Delay, d1					30.2			19.0		19.0	16.1	
Progression Factor					1.00			1.00		1.00	1.00	
Incremental Delay, d2					7.5			72.2		582.8	6.5	
Delay (s)					37.7			91.2		601.8	22.7	
Level of Service					D			F		F	C	
Approach Delay (s)		0.0			37.7			91.2			67.6	
Approach LOS		A			D			F			E	
Intersection Summary												
HCM Average Control Delay			77.9									HCM Level of Service E
HCM Volume to Capacity ratio			1.69									
Actuated Cycle Length (s)			100.0									Sum of lost time (s) 8.0
Intersection Capacity Utilization			95.8%									ICU Level of Service F
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↔↔	↑↑		↗	↑↑	↗	↗	↑↑↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00	1.00	0.91	
Frbp, ped/bikes	1.00	1.00	0.74	1.00	0.99		1.00	1.00	0.79	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3072	3167	1048	3072	3095		1583	3167	1113	1583	4407	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.09	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3072	3167	1048	3072	3095		153	3167	1113	168	4407	
Volume (vph)	137	1599	105	451	731	57	399	1806	465	12	1394	111
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	144	1683	111	475	769	60	420	1901	489	13	1467	117
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	74	0	7	0
Lane Group Flow (vph)	144	1683	111	475	824	0	420	1901	415	13	1577	0
Confl. Peds. (#/hr)	102		193	193		102	173		149	149		173
Confl. Bikes (#/hr)			6			6			9			5
Turn Type	Prot		pm+ov	Prot			pm+pt		pm+ov		pm+pt	
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases			2				8		8		4	
Actuated Green, G (s)	8.0	48.0	55.0	8.0	48.0		49.3	42.6	50.6	41.0	38.3	
Effective Green, g (s)	8.0	49.3	56.3	8.0	49.3		50.7	44.0	52.0	42.4	39.7	
Actuated g/C Ratio	0.07	0.41	0.47	0.07	0.41		0.42	0.37	0.43	0.35	0.33	
Clearance Time (s)	4.0	5.3	4.0	4.0	5.3		4.0	5.4	4.0	4.0	5.4	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	205	1301	527	205	1272		148	1161	519	91	1458	
v/s Ratio Prot	0.05	c0.53	0.01	c0.15	0.27		c0.17	0.60	0.05	0.00	0.36	
v/s Ratio Perm			0.09				c1.04		0.32	0.05		
v/c Ratio	0.70	1.29	0.21	2.32	0.65		2.84	1.64	0.80	0.14	1.08	
Uniform Delay, d1	54.8	35.4	18.8	56.0	28.4		29.5	38.0	29.5	31.9	40.1	
Progression Factor	0.91	0.84	0.75	1.11	0.71		1.18	1.11	1.79	1.00	1.00	
Incremental Delay, d2	1.0	132.7	0.0	603.3	1.8		828.7	287.2	0.8	0.7	48.9	
Delay (s)	50.9	162.3	14.1	665.5	21.9		863.6	329.5	53.7	32.6	89.1	
Level of Service	D	F	B	F	C		F	F	D	C	F	
Approach Delay (s)		145.5			256.3			361.3			88.6	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	231.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.06		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	137.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘	↑↑	↗	↘	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3167	1417	1583	3011		1583	3167	1417	1583	3114	
Flt Permitted	0.20	1.00	1.00	0.07	1.00		0.12	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	330	3167	1417	113	3011		197	3167	1417	279	3114	
Volume (vph)	174	1511	169	117	606	296	210	917	219	201	934	116
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	185	1607	180	124	645	315	223	976	233	214	994	123
RTOR Reduction (vph)	0	0	27	0	29	0	0	0	7	0	8	0
Lane Group Flow (vph)	185	1607	153	124	931	0	223	976	226	214	1109	0
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6		6	2			8		8		4	
Actuated Green, G (s)	57.1	57.1	57.1	57.1	57.1		51.5	51.5	51.5	51.5	51.5	
Effective Green, g (s)	59.0	59.0	59.0	59.0	59.0		53.0	53.0	53.0	53.0	53.0	
Actuated g/C Ratio	0.49	0.49	0.49	0.49	0.49		0.44	0.44	0.44	0.44	0.44	
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9		5.5	5.5	5.5	5.5	5.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	162	1557	697	56	1480		87	1399	626	123	1375	
v/s Ratio Prot		0.51			0.31			0.31			0.36	
v/s Ratio Perm	0.56		0.11	c1.10			c1.13		0.16	0.77		
v/c Ratio	1.14	1.03	0.22	2.21	0.63		2.56	0.70	0.36	1.74	0.81	
Uniform Delay, d1	30.5	30.5	17.4	30.5	22.4		33.5	27.0	22.3	33.5	29.1	
Progression Factor	1.24	1.24	1.32	0.69	0.68		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	71.1	17.3	0.1	551.7	0.2		735.9	2.9	1.6	364.4	5.2	
Delay (s)	108.9	55.2	23.0	572.6	15.4		769.4	29.9	23.9	397.9	34.2	
Level of Service	F	E	C	F	B		F	C	C	F	C	
Approach Delay (s)		57.3			79.1			144.1			92.7	
Approach LOS		E			E			F			F	

Intersection Summary

HCM Average Control Delay	90.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.39		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↖	↗	↖	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3152		1583	3079		1583	1667	1417	1583	1635	
Flt Permitted	0.20	1.00		0.20	1.00		0.20	1.00	1.00	0.28	1.00	
Satd. Flow (perm)	327	3152		327	3079		330	1667	1417	464	1635	
Volume (vph)	97	1463	48	91	696	158	74	599	144	108	613	89
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	101	1524	50	95	725	165	77	624	150	112	639	93
RTOR Reduction (vph)	0	4	0	0	33	0	0	0	1	0	9	0
Lane Group Flow (vph)	101	1570	0	95	857	0	77	624	149	112	723	0
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases	6			2			8		8		4	
Permitted Phases	6			2			8		8		4	
Actuated Green, G (s)	20.1	20.1		20.1	20.1		31.0	31.0	31.0	31.0	31.0	
Effective Green, g (s)	20.4	20.4		20.4	20.4		31.6	31.6	31.6	31.6	31.6	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.53	0.53	0.53	0.53	0.53	
Clearance Time (s)	4.3	4.3		4.3	4.3		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	1072		111	1047		174	878	746	244	861	
v/s Ratio Prot	c0.50			0.28			0.37			c0.44		
v/s Ratio Perm	0.31			0.29			0.23			0.11		0.24
v/c Ratio	0.91	1.46		0.86	0.82		0.44	0.71	0.20	0.46	0.84	
Uniform Delay, d1	18.9	19.8		18.4	18.1		8.8	10.7	7.5	8.9	12.1	
Progression Factor	1.00	1.00		1.06	1.02		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	63.7	214.2		7.7	0.7		8.0	4.9	0.6	6.1	9.7	
Delay (s)	82.6	234.0		27.3	19.1		16.7	15.6	8.1	15.0	21.7	
Level of Service	F	F		C	B		B	B	A	B	C	
Approach Delay (s)	224.9			19.9			14.4			20.8		
Approach LOS	F			B			B			C		

Intersection Summary

HCM Average Control Delay	97.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	119.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷	↶		↷↶			↷↶	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.94			0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.99	
Satd. Flow (prot)	1304	2595		1304	2608	1167		1270			1336	
Flt Permitted	0.10	1.00		0.07	1.00	1.00		0.80			0.87	
Satd. Flow (perm)	136	2595		100	2608	1167		1030			1174	
Volume (vph)	19	1655	55	67	1559	52	68	62	108	42	135	25
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	20	1706	57	69	1607	54	70	64	111	43	139	26
RTOR Reduction (vph)	0	2	0	0	0	18	0	21	0	0	6	0
Lane Group Flow (vph)	20	1761	0	69	1607	36	0	224	0	0	202	0
Turn Type	Perm			Perm			Perm	Perm			Perm	
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8			4		
Actuated Green, G (s)	60.0	60.0		60.0	60.0	60.0		20.9			20.9	
Effective Green, g (s)	60.6	60.6		60.6	60.6	60.6		21.4			21.4	
Actuated g/C Ratio	0.67	0.67		0.67	0.67	0.67		0.24			0.24	
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6		4.5			4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0		2.0			2.0	
Lane Grp Cap (vph)	92	1747		67	1756	786		245			279	
v/s Ratio Prot		0.68			0.62							
v/s Ratio Perm	0.15			c0.69		0.03		c0.22			0.17	
v/c Ratio	0.22	1.01		1.03	0.92	0.05		0.92			0.72	
Uniform Delay, d1	5.6	14.7		14.7	12.5	5.0		33.4			31.6	
Progression Factor	0.44	1.19		1.01	1.01	2.22		1.00			1.00	
Incremental Delay, d2	0.5	8.5		65.6	2.8	0.0		34.9			7.6	
Delay (s)	3.0	25.9		80.4	15.5	11.1		68.3			39.2	
Level of Service	A	C		F	B	B		E			D	
Approach Delay (s)		25.7			17.9			68.3			39.2	
Approach LOS		C			B			E			D	

Intersection Summary

HCM Average Control Delay	25.6	HCM Level of Service	C
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	109.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.98	
Satd. Flow (prot)	1304	2602		1304	2593			1284			1320	
Flt Permitted	0.15	1.00		0.15	1.00			0.96			0.76	
Satd. Flow (perm)	211	2602		211	2593			1234			1020	
Volume (vph)	29	1519	24	161	1438	57	23	138	132	136	172	54
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	32	1651	26	175	1563	62	25	150	143	148	187	59
RTOR Reduction (vph)	0	2	0	0	5	0	0	3	0	0	4	0
Lane Group Flow (vph)	32	1675	0	175	1620	0	0	315	0	0	390	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	25.5	25.5		25.5	25.5			25.5			25.5	
Effective Green, g (s)	26.0	26.0		26.0	26.0			26.0			26.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.43			0.43	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0			2.0	
Lane Grp Cap (vph)	91	1128		91	1124			535			442	
v/s Ratio Prot		0.64			0.62							
v/s Ratio Perm	0.15			0.83				0.26			0.38	
v/c Ratio	0.35	1.49		1.92	1.44			0.59			0.88	
Uniform Delay, d1	11.4	17.0		17.0	17.0			12.9			15.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	10.4	223.1		453.2	203.9			4.7			21.7	
Delay (s)	21.7	240.1		470.2	220.9			17.6			37.3	
Level of Service	C	F		F	F			B			D	
Approach Delay (s)		236.0			245.1			17.6			37.3	
Approach LOS		F			F			B			D	

Intersection Summary

HCM Average Control Delay	204.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	132.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↗	↖	↖	↗	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	1639		1583	1667	1417	1583	1667	1417	1583	1667	1417
Flt Permitted	0.41	1.00		0.15	1.00	1.00	0.27	1.00	1.00	0.23	1.00	1.00
Satd. Flow (perm)	683	1639		256	1667	1417	450	1667	1417	379	1667	1417
Volume (vph)	100	568	72	69	365	89	84	538	96	101	496	77
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	110	624	79	76	401	98	92	591	105	111	545	85
RTOR Reduction (vph)	0	7	0	0	0	98	0	0	60	0	0	48
Lane Group Flow (vph)	110	696	0	76	401	0	92	591	46	111	545	37
Turn Type	Perm			Perm		NA	Perm		Perm	Perm		custom
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		4
Actuated Green, G (s)	25.5	25.5		25.5	25.5	0.0	25.5	25.5	25.5	25.5	25.5	25.5
Effective Green, g (s)	26.0	26.0		26.0	26.0	0.0	26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.43	0.43		0.43	0.43	0.00	0.43	0.43	0.43	0.43	0.43	0.43
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	296	710		111	722	0	195	722	614	164	722	614
v/s Ratio Prot		c0.42			0.24			c0.35				0.33
v/s Ratio Perm	0.16			0.30			0.20		0.03	0.29		0.03
v/c Ratio	0.37	0.98		0.68	0.56	0.00	0.47	0.82	0.07	0.68	0.75	0.06
Uniform Delay, d1	11.5	16.7		13.7	12.7	30.0	12.1	14.9	10.0	13.6	14.3	9.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.6	29.2		29.2	3.1	0.0	8.0	10.0	0.2	20.2	7.2	0.2
Delay (s)	15.0	45.9		42.9	15.8	30.0	20.1	24.9	10.2	33.8	21.5	10.1
Level of Service	B	D		D	B	C	C	C	B	C	C	B
Approach Delay (s)		41.7			21.8			22.4			22.1	
Approach LOS		D			C			C			C	

Intersection Summary

HCM Average Control Delay	27.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗	↖	↖	↖	↖	↖	↖	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.84	1.00	1.00	0.89	1.00	1.00	0.88
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2573		1304	2608	979	1301	1373	1035	1304	1373	1028
Flt Permitted	0.13	1.00		0.12	1.00	1.00	0.13	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	175	2573		169	2608	979	177	1373	1035	174	1373	1028
Volume (vph)	87	1343	79	127	1499	87	111	619	244	169	565	118
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	89	1370	81	130	1530	89	113	632	249	172	577	120
RTOR Reduction (vph)	0	5	0	0	0	48	0	0	101	0	0	78
Lane Group Flow (vph)	89	1446	0	130	1530	41	113	632	148	172	577	42
Conf. Peds. (#/hr)	65		58	58		65	105		101	101		105
Conf. Bikes (#/hr)			7			5			3			7
Turn Type	pm+pt			pm+pt		Perm pm+pt		Perm pm+pt		Perm pm+pt		Perm
Protected Phases	5	2		1	6	6	3	8	8	7	4	4
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	34.8	30.8		36.8	31.8	31.8	35.5	30.5	30.5	36.5	31.0	31.0
Effective Green, g (s)	36.0	31.4		38.0	32.4	32.4	36.5	31.0	31.0	37.5	31.5	31.5
Actuated g/C Ratio	0.40	0.35		0.42	0.36	0.36	0.41	0.34	0.34	0.42	0.35	0.35
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	128	898		142	939	352	140	473	357	148	481	360
v/s Ratio Prot	0.04	0.56		c0.06	c0.59		0.05	c0.46		c0.08	0.42	
v/s Ratio Perm	0.24			0.33		0.04	0.28		0.14	0.41		0.04
v/c Ratio	0.70	1.61		0.92	1.63	0.12	0.81	1.34	0.41	1.16	1.20	0.12
Uniform Delay, d1	22.9	29.3		23.0	28.8	19.2	21.0	29.5	22.6	24.1	29.2	19.8
Progression Factor	1.32	0.71		1.67	1.28	2.30	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.1	276.5		29.1	285.4	0.3	27.7	165.1	0.8	124.2	108.4	0.1
Delay (s)	35.3	297.2		67.6	322.1	44.6	48.7	194.6	23.3	148.3	137.7	20.0
Level of Service	D	F		E	F	D	D	F	C	F	F	B
Approach Delay (s)		282.1			289.1			135.1			123.5	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	229.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	133.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↖	↖		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frbp, ped/bikes		1.00	0.96		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		0.99	1.00		1.00	1.00	
Frt		1.00	0.85		0.99		1.00	1.00		1.00	1.00	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1656	1357		1632		1564	1659		1583	1657	
Flt Permitted		0.96	1.00		0.83		0.25	1.00		0.13	1.00	
Satd. Flow (perm)		1603	1357		1356		413	1659		214	1657	
Volume (vph)	35	367	120	15	167	18	59	906	19	37	714	18
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	35	371	121	15	169	18	60	915	19	37	721	18
RTOR Reduction (vph)	0	0	89	0	6	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	406	32	0	196	0	60	933	0	37	737	0
Conf. Peds. (#/hr)	28		18	18		28	29		34	34		29
Conf. Bikes (#/hr)			11			9			1			2
Turn Type	Perm		Perm	Perm		Perm		Perm		Perm		Perm
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)		15.3	15.3		15.3		35.7	35.7		35.7	35.7	
Effective Green, g (s)		15.8	15.8		15.8		36.2	36.2		36.2	36.2	
Actuated g/C Ratio		0.26	0.26		0.26		0.60	0.60		0.60	0.60	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		0.2	0.2		0.2		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		422	357		357		249	1001		129	1000	
v/s Ratio Prot								c0.56				0.44
v/s Ratio Perm		c0.25	0.02		0.14		0.15			0.17		
v/c Ratio		0.96	0.09		0.55		0.24	0.93		0.29	0.74	
Uniform Delay, d1		21.8	16.7		19.0		5.5	10.8		5.7	8.5	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		33.7	0.0		0.9		2.3	16.1		5.5	4.9	
Delay (s)		55.5	16.7		20.0		7.8	26.9		11.2	13.4	
Level of Service		E	B		B		A	C		B	B	
Approach Delay (s)		46.6			20.0			25.8			13.3	
Approach LOS		D			B			C			B	
Intersection Summary												
HCM Average Control Delay			25.8				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			60.0				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			93.7%				ICU Level of Service				F	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↘	↘	↑↑	↘	↘	↑	↘	↘	↑	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Fl _t Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2608	1167	1304	2608	1167	1304	1373	1167	1304	1373	1167
Fl _t Permitted	0.14	1.00	1.00	0.10	1.00	1.00	0.25	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)	194	2608	1167	134	2608	1167	348	1373	1167	366	1373	1167
Volume (vph)	86	1299	69	54	1056	283	57	529	97	212	543	89
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	89	1339	71	56	1089	292	59	545	100	219	560	92
RTOR Reduction (vph)	0	0	39	0	0	125	0	0	11	0	0	24
Lane Group Flow (vph)	89	1339	32	56	1089	167	59	545	89	219	560	68
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		2			6			8				4
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5
Effective Green, g (s)	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0
Actuated g/C Ratio	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	88	1188	532	61	1188	532	159	625	532	167	625	532
v/s Ratio Prot		c0.51			0.42			0.40				0.41
v/s Ratio Perm	0.46		0.03	0.42		0.14	0.17		0.08	c0.60		0.06
v/c Ratio	1.01	1.13	0.06	0.92	0.92	0.31	0.37	0.87	0.17	1.31	0.90	0.13
Uniform Delay, d ₁	24.5	24.5	13.7	22.9	22.9	15.6	16.1	22.1	14.4	24.5	22.5	14.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d ₂	99.1	68.4	0.2	93.5	12.5	1.5	1.5	12.7	0.1	176.2	15.4	0.1
Delay (s)	123.6	92.9	13.9	116.4	35.4	17.1	17.5	34.9	14.6	200.7	37.9	14.3
Level of Service	F	F	B	F	D	B	B	C	B	F	D	B
Approach Delay (s)		91.0			34.8			30.5			76.4	
Approach LOS		F			C			C			E	

Intersection Summary

HCM Average Control Delay	60.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	120.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑	↗	↘	↗	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.80	1.00	1.00	0.86	1.00	1.00	0.96	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2608	933	1304	2608	1006	1304	1373	1116	1292	1359	1359
Flt Permitted	0.09	1.00	1.00	0.09	1.00	1.00	0.11	1.00	1.00	0.23	1.00	1.00
Satd. Flow (perm)	129	2608	933	119	2608	1006	153	1373	1116	309	1359	1359
Volume (vph)	89	1322	38	104	1282	59	154	503	212	81	645	32
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	94	1392	40	109	1349	62	162	529	223	85	679	34
RTOR Reduction (vph)	0	0	20	0	0	30	0	0	11	0	2	0
Lane Group Flow (vph)	94	1392	20	109	1349	32	162	529	212	85	711	0
Confl. Peds. (#/hr)	50		75	75		50	47		29	29		47
Confl. Bikes (#/hr)			11			2			2			4
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		2			6			8				4
Permitted Phases	2		2	6		6	8		8		4	
Actuated Green, G (s)	45.4	45.4	45.4	45.4	45.4	45.4	35.5	35.5	35.5	35.5	35.5	35.5
Effective Green, g (s)	46.0	46.0	46.0	46.0	46.0	46.0	36.0	36.0	36.0	36.0	36.0	36.0
Actuated g/C Ratio	0.51	0.51	0.51	0.51	0.51	0.51	0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	66	1333	477	61	1333	514	61	549	446	124	544	544
v/s Ratio Prot		0.53			0.52			0.39				0.52
v/s Ratio Perm	0.73		0.02	c0.91		0.03	c1.06		0.19	0.27		
v/c Ratio	1.42	1.04	0.04	1.79	1.01	0.06	2.66	0.96	0.48	0.69	1.31	
Uniform Delay, d1	22.0	22.0	11.0	22.0	22.0	11.1	27.0	26.4	20.0	22.3	27.0	
Progression Factor	1.10	1.01	2.53	1.18	1.11	1.52	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	211.4	26.0	0.0	360.0	10.6	0.0	789.7	29.2	0.8	14.6	151.2	
Delay (s)	235.6	48.2	27.8	386.0	35.1	16.9	816.7	55.6	20.8	36.9	178.2	
Level of Service	F	D	C	F	D	B	F	E	C	D	F	
Approach Delay (s)		59.2			59.6			182.0			163.1	
Approach LOS		E			E			F			F	

Intersection Summary

HCM Average Control Delay	100.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.17		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	131.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕		↔	↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2586		1304	2563		1304	2538		1304	2562	
Flt Permitted	0.11	1.00		0.10	1.00		0.14	1.00		0.19	1.00	
Satd. Flow (perm)	146	2586		137	2563		196	2538		267	2562	
Volume (vph)	164	1301	75	121	1195	153	45	569	123	30	899	119
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	176	1399	81	130	1285	165	48	612	132	32	967	128
RTOR Reduction (vph)	0	5	0	0	11	0	0	20	0	0	12	0
Lane Group Flow (vph)	176	1475	0	130	1439	0	48	724	0	32	1083	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			8		4
Permitted Phases	2			6			8			8		4
Actuated Green, G (s)	53.5	53.5		53.5	53.5		27.5	27.5		27.5	27.5	
Effective Green, g (s)	54.0	54.0		54.0	54.0		28.0	28.0		28.0	28.0	
Actuated g/C Ratio	0.60	0.60		0.60	0.60		0.31	0.31		0.31	0.31	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	88	1552		82	1538		61	790		83	797	
v/s Ratio Prot		0.57			0.56			0.29			c0.42	
v/s Ratio Perm	c1.21			0.95			0.24			0.12		
v/c Ratio	2.00	0.95		1.59	0.94		0.79	0.92		0.39	1.36	
Uniform Delay, d1	18.0	16.8		18.0	16.4		28.3	29.9		24.3	31.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	487.7	13.8		313.4	12.0		65.0	17.2		13.0	169.8	
Delay (s)	505.7	30.5		331.4	28.4		93.2	47.0		37.3	200.8	
Level of Service	F	C		F	C		F	D		D	F	
Approach Delay (s)		81.0			53.3			49.8			196.1	
Approach LOS		F			D			D			F	

Intersection Summary

HCM Average Control Delay	92.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	119.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.97	1.00		0.98	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2579		1304	2580		1267	1301		1281	1310	
Flt Permitted	0.09	1.00		0.08	1.00		0.55	1.00		0.42	1.00	
Satd. Flow (perm)	118	2579		111	2580		735	1301		560	1310	
Volume (vph)	61	1382	80	62	1394	47	57	212	77	32	150	44
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	64	1455	84	65	1467	49	60	223	81	34	158	46
RTOR Reduction (vph)	0	4	0	0	2	0	0	13	0	0	10	0
Lane Group Flow (vph)	64	1535	0	65	1514	0	60	291	0	34	194	0
Conf. Peds. (#/hr)	65		30	30		65	31		25	25		31
Conf. Bikes (#/hr)			5			9			3			1
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	51.7	51.7		51.7	51.7		29.2	29.2		29.2	29.2	
Effective Green, g (s)	52.3	52.3		52.3	52.3		29.7	29.7		29.7	29.7	
Actuated g/C Ratio	0.58	0.58		0.58	0.58		0.33	0.33		0.33	0.33	
Clearance Time (s)	4.6	4.6		4.6	4.6		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	69	1499		65	1499		243	429		185	432	
v/s Ratio Prot		c0.60			0.59			c0.22			0.15	
v/s Ratio Perm	0.54			0.58			0.08			0.06		
v/c Ratio	0.93	1.02		1.00	1.01		0.25	0.68		0.18	0.45	
Uniform Delay, d1	17.1	18.9		18.9	18.9		22.0	26.0		21.5	23.7	
Progression Factor	0.87	0.90		1.15	1.20		1.03	0.88		1.00	1.00	
Incremental Delay, d2	82.2	28.0		33.5	9.6		0.2	3.2		0.2	0.3	
Delay (s)	97.0	45.0		55.2	32.2		22.8	26.0		21.7	24.0	
Level of Service	F	D		E	C		C	C		C	C	
Approach Delay (s)		47.1			33.1			25.5			23.7	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↑	↕	↕	↕	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1664	1417		1655	1417	1583	1667	1417	1583	1648	
Flt Permitted		0.98	1.00		0.74	1.00	0.46	1.00	1.00	0.46	1.00	
Satd. Flow (perm)		1639	1417		1238	1417	773	1667	1417	773	1648	
Volume (vph)	10	301	118	51	301	35	10	337	78	15	312	25
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	12	350	137	59	350	41	12	392	91	17	363	29
RTOR Reduction (vph)	0	0	91	0	0	27	0	0	38	0	3	0
Lane Group Flow (vph)	0	362	46	0	409	14	12	392	53	17	389	0
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4		4	2		2	2		
Actuated Green, G (s)		29.4	29.4		29.4	29.4	51.6	51.6	51.6	51.6	51.6	
Effective Green, g (s)		29.9	29.9		29.9	29.9	52.1	52.1	52.1	52.1	52.1	
Actuated g/C Ratio		0.33	0.33		0.33	0.33	0.58	0.58	0.58	0.58	0.58	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	0.2	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)		545	471		411	471	447	965	820	447	954	
v/s Ratio Prot								0.24			c0.24	
v/s Ratio Perm		0.22	0.03		c0.33	0.01	0.02		0.04	0.02		
v/c Ratio		0.66	0.10		1.00	0.03	0.03	0.41	0.06	0.04	0.41	
Uniform Delay, d1		25.7	20.7		30.0	20.3	8.1	10.4	8.3	8.2	10.4	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.82	0.84	
Incremental Delay, d2		3.0	0.1		42.8	0.0	0.1	1.3	0.2	0.1	1.1	
Delay (s)		28.8	20.8		72.8	20.3	8.2	11.7	8.4	6.8	9.9	
Level of Service		C	C		E	C	A	B	A	A	A	
Approach Delay (s)		26.6			68.0			11.0			9.8	
Approach LOS		C			E			B			A	

Intersection Summary

HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.91		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2586		1304	2583		1304	1250		1304	1331	
Flt Permitted	0.17	1.00		0.17	1.00		0.32	1.00		0.14	1.00	
Satd. Flow (perm)	229	2586		229	2583		439	1250		196	1331	
Volume (vph)	11	1070	65	306	893	60	10	285	421	56	379	95
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	12	1176	71	336	981	66	11	313	463	62	416	104
RTOR Reduction (vph)	0	7	0	0	8	0	0	11	0	0	15	0
Lane Group Flow (vph)	12	1240	0	336	1039	0	11	765	0	62	505	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	23.5	23.5		23.5	23.5		27.5	27.5		27.5	27.5	
Effective Green, g (s)	24.0	24.0		24.0	24.0		28.0	28.0		28.0	28.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40		0.47	0.47		0.47	0.47	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	92	1034		92	1033		205	583		91	621	
v/s Ratio Prot		0.48			0.40			c0.61				0.38
v/s Ratio Perm	0.05			c1.47			0.03			0.32		
v/c Ratio	0.13	1.20		3.65	1.01		0.05	1.31		0.68	0.81	
Uniform Delay, d1	11.4	18.0		18.0	18.0		8.8	16.0		12.5	13.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.9	99.0		1219.8	29.3		0.0	152.7		15.4	7.6	
Delay (s)	14.3	117.0		1237.8	47.3		8.8	168.7		27.9	21.4	
Level of Service	B	F		F	D		A	F		C	C	
Approach Delay (s)		116.1			336.6			166.4			22.1	
Approach LOS		F			F			F			C	

Intersection Summary

HCM Average Control Delay	188.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.40		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	139.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕			↕	↗		↕	↖
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Volume (veh/h)	29	1338	34	50	1293	69	15	11	108	9	68	55
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	31	1439	37	54	1390	74	16	12	116	10	73	59
Pedestrians	16			25			55			108		
Lane Width (ft)	12.0			12.0			12.0			12.0		
Walking Speed (ft/s)	4.0			4.0			4.0			4.0		
Percent Blockage	1			2			5			9		
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)	801				400							
pX, platoon unblocked	0.49			0.79			0.59	0.59	0.79	0.59	0.59	0.49
vC, conflicting volume	1573			1530			2489	3254	818	2572	3236	856
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1122			1403			1744	3033	496	1883	3001	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	89			85			0	0	70	0	0	88
cM capacity (veh/h)	274			362			0	5	381	0	5	474

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	31	959	516	54	927	538	28	116	83	59
Volume Left	31	0	0	54	0	0	16	0	10	0
Volume Right	0	0	37	0	0	74	0	116	0	59
cSH	274	1700	1700	362	1700	1700	0	381	0	474
Volume to Capacity	0.11	0.56	0.30	0.15	0.55	0.32	Err	0.30	Err	0.12
Queue Length 95th (ft)	10	0	0	13	0	0	Err	32	Err	11
Control Delay (s)	19.8	0.0	0.0	16.7	0.0	0.0	Err	18.5	Err	13.7
Lane LOS	C			C			F	C	F	B
Approach Delay (s)	0.4			0.6			Err		Err	
Approach LOS							F		F	

Intersection Summary

Average Delay	Err	
Intersection Capacity Utilization	83.0%	ICU Level of Service E
Analysis Period (min)	15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↘	↘	↗	↘	↘	↗	↘	↘	↗	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.86	1.00	1.00	0.71	1.00	1.00	0.94	1.00	1.00	0.88
Flpb, ped/bikes	0.97	1.00	1.00	0.98	1.00	1.00	0.94	1.00	1.00	0.98	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1268	2608	1002	1280	2608	828	1229	1373	1094	1273	1373	1023
Flt Permitted	0.16	1.00	1.00	0.19	1.00	1.00	0.36	1.00	1.00	0.30	1.00	1.00
Satd. Flow (perm)	212	2608	1002	262	2608	828	468	1373	1094	404	1373	1023
Volume (vph)	38	1094	51	69	1218	75	96	360	104	90	318	67
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	39	1116	52	70	1243	77	98	367	106	92	324	68
RTOR Reduction (vph)	0	0	20	0	0	30	0	0	24	0	0	15
Lane Group Flow (vph)	39	1116	32	70	1243	47	98	367	82	92	324	53
Conf. Peds. (#/hr)	115		91	91		115	110		51	51		110
Conf. Bikes (#/hr)			8			8						5
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		2			6			8				4
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	54.3	54.3	54.3	54.3	54.3	54.3	26.7	26.7	26.7	26.7	26.7	26.7
Effective Green, g (s)	54.8	54.8	54.8	54.8	54.8	54.8	27.2	27.2	27.2	27.2	27.2	27.2
Actuated g/C Ratio	0.61	0.61	0.61	0.61	0.61	0.61	0.30	0.30	0.30	0.30	0.30	0.30
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	129	1588	610	160	1588	504	141	415	331	122	415	309
v/s Ratio Prot		0.43			c0.48			c0.27				0.24
v/s Ratio Perm	0.18		0.03	0.27		0.06	0.21		0.07	0.23		0.05
v/c Ratio	0.30	0.70	0.05	0.44	0.78	0.09	0.70	0.88	0.25	0.75	0.78	0.17
Uniform Delay, d1	8.4	12.0	7.1	9.4	13.2	7.3	27.7	29.9	23.7	28.4	28.7	23.1
Progression Factor	1.29	1.09	2.44	0.69	0.77	0.55	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.1	1.8	0.1	3.4	1.6	0.1	11.3	19.0	0.1	20.6	8.5	0.1
Delay (s)	14.9	14.9	17.4	9.8	11.7	4.1	39.1	48.9	23.8	49.0	37.2	23.2
Level of Service	B	B	B	A	B	A	D	D	C	D	D	C
Approach Delay (s)		15.0			11.2			42.6			37.5	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM Average Control Delay	20.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↕		↕	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00	1.00		0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1662	1417		1655	1417	1583	1661		1583	1659	
Flt Permitted		0.97	1.00		0.92	1.00	0.43	1.00		0.40	1.00	
Satd. Flow (perm)		1618	1417		1535	1417	720	1661		667	1659	
Volume (vph)	13	208	93	43	251	81	54	474	10	20	430	13
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	14	221	99	46	267	86	57	504	11	21	457	14
RTOR Reduction (vph)	0	0	73	0	0	63	0	1	0	0	2	0
Lane Group Flow (vph)	0	235	26	0	313	23	57	514	0	21	469	0
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4		4	2			2		
Actuated Green, G (s)		15.4	15.4		15.4	15.4	35.6	35.6		35.6	35.6	
Effective Green, g (s)		15.9	15.9		15.9	15.9	36.1	36.1		36.1	36.1	
Actuated g/C Ratio		0.27	0.27		0.27	0.27	0.60	0.60		0.60	0.60	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		2.0	2.0		2.0	2.0	0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		429	376		407	376	433	999		401	998	
v/s Ratio Prot							c0.31				0.28	
v/s Ratio Perm		0.15	0.02		c0.20	0.02	0.08			0.03		
v/c Ratio		0.55	0.07		0.77	0.06	0.13	0.51		0.05	0.47	
Uniform Delay, d1		19.0	16.5		20.4	16.5	5.2	6.9		4.9	6.6	
Progression Factor		1.00	1.00		1.00	1.00	1.56	1.59		1.00	1.00	
Incremental Delay, d2		0.8	0.0		7.7	0.0	0.4	1.1		0.2	1.6	
Delay (s)		19.7	16.5		28.0	16.5	8.4	12.0		5.2	8.2	
Level of Service		B	B		C	B	A	B		A	A	
Approach Delay (s)		18.8			25.5			11.6			8.1	
Approach LOS		B			C			B			A	

Intersection Summary

HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↖	↗	↗	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2579		1304	2542		1304	1373	1167	1304	1373	1167
Flt Permitted	0.20	1.00		0.16	1.00		0.36	1.00	1.00	0.33	1.00	1.00
Satd. Flow (perm)	273	2579		220	2542		492	1373	1167	453	1373	1167
Volume (vph)	30	966	76	196	780	158	50	382	186	87	360	104
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	33	1062	84	215	857	174	55	420	204	96	396	114
RTOR Reduction (vph)	0	8	0	0	25	0	0	0	26	0	0	50
Lane Group Flow (vph)	33	1138	0	215	1007	0	55	420	178	96	396	64
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		2			6			8				4
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	30.1	30.1		30.1	30.1		20.9	20.9	20.9	20.9	20.9	20.9
Effective Green, g (s)	30.6	30.6		30.6	30.6		21.4	21.4	21.4	21.4	21.4	21.4
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.36	0.36	0.36	0.36	0.36	0.36
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	139	1315		112	1296		175	490	416	162	490	416
v/s Ratio Prot		0.44			0.40			c0.31				0.29
v/s Ratio Perm	0.12			c0.98			0.11		0.15	0.21		0.05
v/c Ratio	0.24	0.87		1.92	0.78		0.31	0.86	0.43	0.59	0.81	0.15
Uniform Delay, d1	8.2	12.9		14.7	11.9		14.0	17.9	14.7	15.7	17.4	13.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.64	0.72	0.50
Incremental Delay, d2	4.0	7.8		445.0	4.6		0.4	13.3	0.3	3.5	8.2	0.1
Delay (s)	12.2	20.7		459.7	16.5		14.4	31.2	14.9	13.6	20.7	6.6
Level of Service	B	C		F	B		B	C	B	B	C	A
Approach Delay (s)		20.4			93.0			25.0			17.0	
Approach LOS		C			F			C			B	

Intersection Summary

























HCM Average Control Delay	45.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↘	↘	↑↑		↘	↑	↘	↘	↑	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2608	1167	1304	2593		1304	1373	1167	1304	1373	1167
Flt Permitted	0.10	1.00	1.00	0.17	1.00		0.35	1.00	1.00	0.30	1.00	1.00
Satd. Flow (perm)	132	2608	1167	227	2593		477	1373	1167	406	1373	1167
Volume (vph)	58	1113	69	45	1323	53	99	362	140	54	325	37
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	62	1197	74	48	1423	57	106	389	151	58	349	40
RTOR Reduction (vph)	0	0	30	0	2	0	0	0	21	0	0	10
Lane Group Flow (vph)	62	1197	44	48	1478	0	106	389	130	58	349	30
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		Perm
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	52.5	52.5	52.5	52.5	52.5		28.4	28.4	28.4	28.4	28.4	28.4
Effective Green, g (s)	53.1	53.1	53.1	53.1	53.1		28.9	28.9	28.9	28.9	28.9	28.9
Actuated g/C Ratio	0.59	0.59	0.59	0.59	0.59		0.32	0.32	0.32	0.32	0.32	0.32
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	78	1539	689	134	1530		153	441	375	130	441	375
v/s Ratio Prot		0.46			c0.57			c0.28				0.25
v/s Ratio Perm	0.47		0.04	0.21			0.22		0.11	0.14		0.03
v/c Ratio	0.79	0.78	0.06	0.36	0.97		0.69	0.88	0.35	0.45	0.79	0.08
Uniform Delay, d1	14.2	14.0	7.9	9.6	17.6		26.7	28.9	23.3	24.2	27.8	21.3
Progression Factor	1.08	1.16	0.86	1.12	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	55.4	3.9	0.2	5.3	13.0		10.4	17.9	0.2	0.9	8.8	0.0
Delay (s)	70.8	20.2	6.9	16.0	29.7		37.1	46.8	23.5	25.1	36.6	21.3
Level of Service	E	C	A	B	C		D	D	C	C	D	C
Approach Delay (s)		21.8			29.3			39.8			33.7	
Approach LOS		C			C			D			C	

Intersection Summary

HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	0.98
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2608	1167	1304	2608	1167	1304	1373	1167	1304	2550	2550
Flt Permitted	0.44	1.00	1.00	0.41	1.00	1.00	0.11	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	598	2608	1167	558	2608	1167	153	1373	1167	153	2550	2550
Volume (vph)	174	501	288	45	455	13	136	1098	61	31	869	151
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	189	545	313	49	495	14	148	1193	66	34	945	164
RTOR Reduction (vph)	0	0	22	0	0	7	0	0	25	0	16	0
Lane Group Flow (vph)	189	545	291	49	495	7	148	1193	41	34	1093	0
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		2			6			8				4
Permitted Phases	2		2	6		6	8		8		4	
Actuated Green, G (s)	45.5	45.5	45.5	45.5	45.5	45.5	35.5	35.5	35.5	35.5	35.5	35.5
Effective Green, g (s)	46.0	46.0	46.0	46.0	46.0	46.0	36.0	36.0	36.0	36.0	36.0	36.0
Actuated g/C Ratio	0.51	0.51	0.51	0.51	0.51	0.51	0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	306	1333	596	285	1333	596	61	549	467	61	1020	1020
v/s Ratio Prot		0.21			0.19			0.87				0.43
v/s Ratio Perm	c0.32		0.25	0.09		0.01	c0.97		0.04	0.22		
v/c Ratio	0.62	0.41	0.49	0.17	0.37	0.01	2.43	2.17	0.09	0.56	1.07	
Uniform Delay, d1	15.7	13.6	14.3	11.8	13.3	10.8	27.0	27.0	16.8	20.8	27.0	
Progression Factor	0.76	0.93	0.85	0.38	0.45	0.24	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.4	0.4	1.4	0.5	0.3	0.0	688.6	533.9	0.0	6.1	49.6	
Delay (s)	16.4	13.2	13.6	5.0	6.2	2.6	715.6	560.9	16.8	27.0	76.6	
Level of Service	B	B	B	A	A	A	F	F	B	C	E	
Approach Delay (s)		13.9			6.0			551.6			75.1	
Approach LOS		B			A			F			E	
Intersection Summary												
HCM Average Control Delay	211.8		HCM Level of Service				F					
HCM Volume to Capacity ratio	1.41											
Actuated Cycle Length (s)	90.0		Sum of lost time (s)				8.0					
Intersection Capacity Utilization	126.1%		ICU Level of Service				H					
Analysis Period (min)	15											
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↗		↖	↗	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2539		1304	1373	1167	1304	2525		1304	2600	
Flt Permitted	0.33	1.00		0.25	1.00	1.00	0.24	1.00		0.15	1.00	
Satd. Flow (perm)	450	2539		339	1373	1167	331	2525		211	2600	
Volume (vph)	14	660	140	202	465	115	103	992	265	118	796	17
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	15	688	146	210	484	120	107	1033	276	123	829	18
RTOR Reduction (vph)	0	30	0	0	0	25	0	40	0	0	2	0
Lane Group Flow (vph)	15	804	0	210	484	95	107	1269	0	123	845	0
Turn Type	Perm			Perm			Perm	Perm		Perm		
Protected Phases	2			6			6	8		4		
Permitted Phases	2			6			6	8		4		
Actuated Green, G (s)	25.5	25.5		25.5	25.5	25.5	25.5	25.5		25.5	25.5	
Effective Green, g (s)	26.0	26.0		26.0	26.0	26.0	26.0	26.0		26.0	26.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43	0.43	0.43	0.43		0.43	0.43	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	195	1100		147	595	506	143	1094		91	1127	
v/s Ratio Prot		0.32			0.35			0.50			0.32	
v/s Ratio Perm	0.03			c0.62		0.08	0.32			c0.58		
v/c Ratio	0.08	0.73		1.43	0.81	0.19	0.75	1.16		1.35	0.75	
Uniform Delay, d1	10.0	14.1		17.0	14.9	10.5	14.3	17.0		17.0	14.3	
Progression Factor	0.63	0.47		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	3.5		227.5	11.6	0.8	16.9	82.3		214.4	2.4	
Delay (s)	6.9	10.2		244.5	26.5	11.3	31.2	99.3		231.4	16.7	
Level of Service	A	B		F	C	B	C	F		F	B	
Approach Delay (s)		10.2			80.5			94.2			43.9	
Approach LOS		B			F			F			D	

Intersection Summary

HCM Average Control Delay	61.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕			↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1304	2594		1304	2586		1304	1340			1352	
Flt Permitted	0.10	1.00		0.16	1.00		0.34	1.00			0.68	
Satd. Flow (perm)	142	2594		226	2586		467	1340			927	
Volume (vph)	28	987	36	56	1152	67	43	371	70	63	394	33
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	30	1061	39	60	1239	72	46	399	75	68	424	35
RTOR Reduction (vph)	0	3	0	0	5	0	0	8	0	0	3	0
Lane Group Flow (vph)	30	1097	0	60	1306	0	46	466	0	0	524	0
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases	2		6		6		8		8			4
Permitted Phases	2		6		6		8		8			4
Actuated Green, G (s)	45.5	45.5		45.5	45.5		35.5	35.5			35.5	
Effective Green, g (s)	46.0	46.0		46.0	46.0		36.0	36.0			36.0	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.40	0.40			0.40	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5			4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)	73	1326		116	1322		187	536			371	
v/s Ratio Prot		0.42			c0.50			0.35				
v/s Ratio Perm	0.21			0.27			0.10				c0.57	
v/c Ratio	0.41	0.83		0.52	0.99		0.25	0.87			1.41	
Uniform Delay, d1	13.6	18.6		14.6	21.7		18.0	24.8			27.0	
Progression Factor	1.31	1.16		0.90	0.98		1.00	1.00			1.00	
Incremental Delay, d2	15.3	5.7		13.5	20.3		0.3	13.6			200.9	
Delay (s)	33.1	27.4		26.7	41.7		18.2	38.5			227.9	
Level of Service	C			C		D		B		D		F
Approach Delay (s)		27.5			41.0			36.7			227.9	
Approach LOS		C			D			D			F	

Intersection Summary

HCM Average Control Delay	63.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	134.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↗		↖	↗	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2560		1304	1373	1167	1304	1362		1304	1357	
Flt Permitted	0.25	1.00		0.29	1.00	1.00	0.26	1.00		0.33	1.00	
Satd. Flow (perm)	342	2560		404	1373	1167	352	1362		457	1357	
Volume (vph)	25	638	89	50	564	45	81	432	22	97	491	39
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	26	658	92	52	581	46	84	445	23	100	506	40
RTOR Reduction (vph)	0	18	0	0	0	25	0	3	0	0	5	0
Lane Group Flow (vph)	26	732	0	52	581	21	84	465	0	100	541	0
Turn Type	Perm			Perm			Perm	Perm		Perm		
Protected Phases	2			6			6	8		8		4
Permitted Phases	2			6			6	8		4		
Actuated Green, G (s)	26.3	26.3		26.3	26.3	26.3	24.7	24.7		24.7	24.7	
Effective Green, g (s)	26.8	26.8		26.8	26.8	26.8	25.2	25.2		25.2	25.2	
Actuated g/C Ratio	0.45	0.45		0.45	0.45	0.45	0.42	0.42		0.42	0.42	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	153	1143		180	613	521	148	572		192	570	
v/s Ratio Prot	0.29			c0.42			0.34			c0.40		
v/s Ratio Perm	0.08			0.13			0.02			0.24		
v/c Ratio	0.17	0.64		0.29	0.95	0.04	0.57	0.81		0.52	0.95	
Uniform Delay, d1	9.9	12.9		10.5	15.9	9.4	13.3	15.3		12.9	16.8	
Progression Factor	1.00	1.00		0.95	0.78	1.26	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.4	2.8		2.7	19.7	0.1	3.0	8.2		1.2	25.2	
Delay (s)	12.3	15.6		12.8	32.1	11.8	16.2	23.5		14.1	42.0	
Level of Service	B			B		C	B	B		C	D	
Approach Delay (s)	15.5			29.3			22.4			37.7		
Approach LOS	B			C			C			D		

Intersection Summary

HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗		↖	↗	↘	↖	↗	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frbp, ped/bikes	1.00	1.00	0.48	1.00	0.98		1.00	1.00	0.91	1.00	0.99	
Flpb, ped/bikes	0.95	1.00	1.00	0.86	1.00		0.93	1.00	1.00	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1235	2608	557	1115	2550		1214	1373	1067	1265	1347	
Flt Permitted	0.23	1.00	1.00	0.32	1.00		0.58	1.00	1.00	0.30	1.00	
Satd. Flow (perm)	296	2608	557	372	2550		747	1373	1067	393	1347	
Volume (vph)	10	748	74	136	928	47	174	368	121	41	157	13
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	10	771	76	140	957	48	179	379	125	42	162	13
RTOR Reduction (vph)	0	0	30	0	3	0	0	0	30	0	3	0
Lane Group Flow (vph)	10	771	46	140	1002	0	179	379	95	42	172	0
Conf. Peds. (#/hr)	126		228	228		126	86		63	63		86
Conf. Bikes (#/hr)			17			8			10			5
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)	53.6	53.6	53.6	53.6	53.6		27.4	27.4	27.4	27.4	27.4	
Effective Green, g (s)	54.1	54.1	54.1	54.1	54.1		27.9	27.9	27.9	27.9	27.9	
Actuated g/C Ratio	0.60	0.60	0.60	0.60	0.60		0.31	0.31	0.31	0.31	0.31	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	178	1568	335	224	1533		232	426	331	122	418	
v/s Ratio Prot		0.30			c0.39			c0.28				0.13
v/s Ratio Perm	0.03		0.08	0.38			0.24		0.09	0.11		
v/c Ratio	0.06	0.49	0.14	0.62	0.65		0.77	0.89	0.29	0.34	0.41	
Uniform Delay, d1	7.4	10.2	7.8	11.5	11.8		28.2	29.6	23.5	24.0	24.5	
Progression Factor	0.96	0.69	1.04	1.00	1.14		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	0.9	0.7	3.6	0.6		13.4	19.2	0.2	0.6	0.2	
Delay (s)	7.6	7.8	8.8	15.2	14.0		41.6	48.8	23.7	24.6	24.8	
Level of Service	A	A	A	B	B		D	D	C	C	C	
Approach Delay (s)		7.9			14.2			42.3			24.8	
Approach LOS		A			B			D			C	

Intersection Summary

HCM Average Control Delay	19.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↖		↖	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes		1.00	0.93		0.99		1.00	0.98		1.00	1.00	0.92
Flpb, ped/bikes		1.00	1.00		0.99		0.97	1.00		0.96	1.00	1.00
Frt		1.00	0.85		0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1649	1312		1590		1534	1574		1527	1667	1298
Flt Permitted		0.92	1.00		0.87		0.43	1.00		0.37	1.00	1.00
Satd. Flow (perm)		1535	1312		1403		699	1574		590	1667	1298
Volume (vph)	22	148	54	117	313	45	32	357	101	14	388	7
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	23	154	56	122	326	47	33	372	105	15	404	7
RTOR Reduction (vph)	0	0	34	0	7	0	0	16	0	0	0	4
Lane Group Flow (vph)	0	177	22	0	488	0	33	461	0	15	404	3
Conf. Peds. (#/hr)	55		60	60		55	40		54	54		40
Conf. Bikes (#/hr)			6						2			3
Turn Type	Perm		Perm	Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)		22.7	22.7		22.7		28.3	28.3		28.3	28.3	28.3
Effective Green, g (s)		23.2	23.2		23.2		28.8	28.8		28.8	28.8	28.8
Actuated g/C Ratio		0.39	0.39		0.39		0.48	0.48		0.48	0.48	0.48
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		594	507		542		336	756		283	800	623
v/s Ratio Prot							c0.29				0.24	
v/s Ratio Perm		0.12	0.02		c0.35		0.05			0.03		0.00
v/c Ratio		0.30	0.04		0.90		0.10	0.61		0.05	0.51	0.01
Uniform Delay, d1		12.8	11.5		17.3		8.5	11.5		8.3	10.7	8.1
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.1	0.0		17.7		0.6	3.7		0.4	2.3	0.0
Delay (s)		12.9	11.5		35.0		9.1	15.1		8.7	13.0	8.1
Level of Service		B	B		D		A	B		A	B	A
Approach Delay (s)		12.5			35.0			14.7			12.7	
Approach LOS		B			D			B			B	
Intersection Summary												
HCM Average Control Delay			20.0				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			60.0				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			83.2%				ICU Level of Service				E	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↘	↘	↑↑	↘	↘	↑	↘	↘	↑	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.65	1.00	1.00	0.66	1.00	1.00	0.80	1.00	1.00	0.71
Flpb, ped/bikes	0.89	1.00	1.00	0.99	1.00	1.00	0.93	1.00	1.00	0.91	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1161	2608	760	1285	2608	765	1210	1373	931	1189	1373	833
Flt Permitted	0.37	1.00	1.00	0.25	1.00	1.00	0.24	1.00	1.00	0.40	1.00	1.00
Satd. Flow (perm)	458	2608	760	332	2608	765	301	1373	931	505	1373	833
Volume (vph)	26	696	101	127	722	212	111	361	22	94	526	49
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	26	703	102	128	729	214	112	365	22	95	531	49
RTOR Reduction (vph)	0	0	62	0	0	87	0	0	13	0	0	8
Lane Group Flow (vph)	26	703	40	128	729	127	112	365	9	95	531	41
Confl. Peds. (#/hr)	214		345	214		345	205		142	142		205
Confl. Bikes (#/hr)			21			5			5			10
Turn Type	Perm		Perm	pm+pt		Perm	Perm		Perm	Perm		Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	34.7	34.7	34.7	44.6	44.6	44.6	36.4	36.4	36.4	36.4	36.4	36.4
Effective Green, g (s)	35.2	35.2	35.2	45.1	45.1	45.1	36.9	36.9	36.9	36.9	36.9	36.9
Actuated g/C Ratio	0.39	0.39	0.39	0.50	0.50	0.50	0.41	0.41	0.41	0.41	0.41	0.41
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	179	1020	297	229	1307	383	123	563	382	207	563	342
v/s Ratio Prot		c0.27		0.04	c0.28			0.27			c0.39	
v/s Ratio Perm	0.06		0.05	0.24		0.17	0.37		0.01	0.19		0.05
v/c Ratio	0.15	0.69	0.13	0.56	0.56	0.33	0.91	0.65	0.02	0.46	0.94	0.12
Uniform Delay, d1	17.7	22.8	17.6	13.9	15.5	13.4	25.0	21.3	15.8	19.3	25.5	16.5
Progression Factor	0.84	0.99	1.03	0.82	0.75	0.39	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6	3.5	0.9	1.2	1.3	1.7	53.6	1.9	0.0	0.6	24.3	0.1
Delay (s)	16.4	26.0	18.9	12.7	13.0	6.9	78.6	23.3	15.8	19.9	49.8	16.5
Level of Service	B	C	B	B	B	A	E	C	B	B	D	B
Approach Delay (s)		24.9			11.8			35.4			43.2	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM Average Control Delay	26.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↖	↗	↖	↕	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00	1.00	1.00	0.95	
Frbp, ped/bikes		0.85			0.98		1.00	1.00	0.69	1.00	0.98	
Flpb, ped/bikes		0.99			0.96		0.91	1.00	1.00	0.90	1.00	
Frt		0.92			0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00			0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1292			1533		1447	1667	977	1419	3059	
Flt Permitted		0.96			0.79		0.24	1.00	1.00	0.31	1.00	
Satd. Flow (perm)		1246			1227		370	1667	977	460	3059	
Volume (vph)	25	132	205	108	216	35	57	475	59	65	741	52
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	27	140	218	115	230	37	61	505	63	69	788	55
RTOR Reduction (vph)	0	16	0	0	6	0	0	0	36	0	9	0
Lane Group Flow (vph)	0	369	0	0	376	0	61	505	27	69	835	0
Conf. Peds. (#/hr)	164		246	246		164	191		157	157		191
Conf. Bikes (#/hr)			11			14			3			4
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		2			6			8				4
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		25.5			25.5		25.5	25.5	25.5	25.5	25.5	25.5
Effective Green, g (s)		26.0			26.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio		0.43			0.43		0.43	0.43	0.43	0.43	0.43	0.43
Clearance Time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)		540			532		160	722	423	199	1326	
v/s Ratio Prot							c0.30				0.27	
v/s Ratio Perm		0.30			c0.31		0.16		0.03	0.15		
v/c Ratio		0.68			0.71		0.38	0.70	0.06	0.35	0.63	
Uniform Delay, d1		13.7			13.9		11.5	13.8	9.9	11.3	13.2	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		6.9			7.7		6.8	5.6	0.3	4.7	2.3	
Delay (s)		20.6			21.6		18.3	19.4	10.2	16.1	15.5	
Level of Service		C			C		B	B	B	B	B	
Approach Delay (s)		20.6			21.6			18.4			15.6	
Approach LOS		C			C			B			B	
Intersection Summary												
HCM Average Control Delay			18.2				HCM Level of Service			B		
HCM Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			60.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			95.9%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↑	↗	↘	↑	↗	↘	↑↔	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected		1.00	1.00		1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1373	1167		1373	1167	1304	1373	1167	1304	2533	
Flt Permitted		1.00	1.00		1.00	1.00	0.13	1.00	1.00	0.13	1.00	
Satd. Flow (perm)		1373	1167		1373	1167	177	1373	1167	177	2533	
Volume (vph)	0	329	118	0	226	85	80	553	76	108	812	193
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	0	378	136	0	260	98	92	636	87	124	933	222
RTOR Reduction (vph)	0	0	102	0	0	74	0	0	55	0	24	0
Lane Group Flow (vph)	0	378	34	0	260	24	92	636	32	124	1131	0
Turn Type		Perm			Perm		Perm		Perm		Perm	
Protected Phases		2			6			8			4	
Permitted Phases		2			6		8		8		4	
Actuated Green, G (s)		20.5	20.5		20.5	20.5	30.5	30.5	30.5	30.5	30.5	
Effective Green, g (s)		21.0	21.0		21.0	21.0	31.0	31.0	31.0	31.0	31.0	
Actuated g/C Ratio		0.25	0.25		0.25	0.25	0.36	0.36	0.36	0.36	0.36	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)		339	288		339	288	65	501	426	65	924	
v/s Ratio Prot		c0.28			c0.19			0.46			0.45	
v/s Ratio Perm		0.03			0.02		0.52		0.03		c0.70	
v/c Ratio		1.12	0.12		0.77	0.08	1.42	1.27	0.07	1.91	1.22	
Uniform Delay, d1		32.0	24.8		29.7	24.6	27.0	27.0	17.6	27.0	27.0	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		83.6	0.8		15.3	0.6	255.9	136.3	0.3	460.1	110.5	
Delay (s)		115.6	25.6		45.0	25.2	282.9	163.3	18.0	487.1	137.5	
Level of Service		F	C		D	C	F	F	B	F	F	
Approach Delay (s)		91.8			39.6			161.3			171.4	
Approach LOS		F			D			F			F	

Intersection Summary

HCM Average Control Delay	138.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
181: Wilshire Blvd & 3rd St



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↑↑		↖	↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.91		1.00	0.79
Flpb, ped/bikes	0.94	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.96		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1220	2608	2284		1304	920
Flt Permitted	0.27	1.00	1.00		0.95	1.00
Satd. Flow (perm)	348	2608	2284		1304	920
Volume (vph)	54	662	646	252	132	76
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	58	712	695	271	142	82
RTOR Reduction (vph)	0	0	26	0	0	67
Lane Group Flow (vph)	58	712	940	0	142	15
Conf. Peds. (#/hr)	122			122	475	186
Conf. Bikes (#/hr)				7		3
Turn Type	Perm				Perm	
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	64.9	64.9	64.9		16.1	16.1
Effective Green, g (s)	65.4	65.4	65.4		16.6	16.6
Actuated g/C Ratio	0.73	0.73	0.73		0.18	0.18
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	253	1895	1660		241	170
v/s Ratio Prot		0.27	c0.41		c0.11	
v/s Ratio Perm	0.17					0.02
v/c Ratio	0.23	0.38	0.57		0.59	0.09
Uniform Delay, d1	4.0	4.6	5.7		33.6	30.4
Progression Factor	1.45	1.40	0.85		1.00	1.00
Incremental Delay, d2	2.1	0.6	1.2		2.4	0.1
Delay (s)	7.9	7.0	6.1		35.9	30.5
Level of Service	A	A	A		D	C
Approach Delay (s)		7.1	6.1		34.0	
Approach LOS		A	A		C	

Intersection Summary

HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘		↖	↗	↖	↗	↘	↖	↗	↘
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	1667	1417		1658	1417	1583	1667	1417	1583	1667	1417
Flt Permitted	0.21	1.00	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	345	1667	1417		1592	1417	1583	1667	1417	1583	1667	1417
Volume (vph)	63	101	166	39	314	84	379	790	48	24	705	109
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	67	107	177	41	334	89	403	840	51	26	750	116
RTOR Reduction (vph)	0	0	46	0	0	70	0	0	19	0	0	65
Lane Group Flow (vph)	67	107	131	0	375	19	403	840	32	26	750	51
Turn Type	Perm		pm+ov	Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases		2	3		6		3	8		7		4
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	18.8	18.8	39.3		18.8	18.8	20.5	55.9	55.9	1.8	37.2	37.2
Effective Green, g (s)	19.3	19.3	40.3		19.3	19.3	21.0	56.4	56.4	2.3	37.7	37.7
Actuated g/C Ratio	0.21	0.21	0.45		0.21	0.21	0.23	0.63	0.63	0.03	0.42	0.42
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	1.0	3.0	3.0
Lane Grp Cap (vph)	74	357	697		341	304	369	1045	888	40	698	594
v/s Ratio Prot		0.06	0.04				c0.25	0.50		0.02	c0.45	
v/s Ratio Perm	0.19		0.05		c0.24	0.01			0.02			0.04
v/c Ratio	0.91	0.30	0.19		1.10	0.06	1.09	0.80	0.04	0.65	1.07	0.09
Uniform Delay, d1	34.5	29.7	15.0		35.4	28.1	34.5	12.6	6.4	43.5	26.1	15.8
Progression Factor	1.00	1.00	1.00		1.00	1.00	0.93	1.45	2.71	1.00	1.00	1.00
Incremental Delay, d2	80.5	2.1	0.1		78.3	0.4	68.2	3.5	0.0	25.2	55.9	0.1
Delay (s)	115.0	31.8	15.1		113.6	28.5	100.4	21.9	17.4	68.7	82.0	15.8
Level of Service	F	C	B		F	C	F	C	B	E	F	B
Approach Delay (s)		39.3			97.3			46.2			73.0	
Approach LOS		D			F			D			E	

Intersection Summary

HCM Average Control Delay	61.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↖	↕	↗	↖	↕
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	2530	1167	2608	1167	1304	2608
Flt Permitted	0.95	1.00	1.00	1.00	0.21	1.00
Satd. Flow (perm)	2530	1167	2608	1167	290	2608
Volume (vph)	299	256	972	184	169	760
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	311	267	1012	192	176	792
RTOR Reduction (vph)	0	161	0	76	0	0
Lane Group Flow (vph)	311	106	1012	116	176	792
Turn Type		Perm		Perm	pm+pt	
Protected Phases	6		8		7	4
Permitted Phases		6		8		4
Actuated Green, G (s)	16.9	16.9	54.1	54.1	64.1	64.1
Effective Green, g (s)	17.4	17.4	54.6	54.6	64.6	64.6
Actuated g/C Ratio	0.19	0.19	0.61	0.61	0.72	0.72
Clearance Time (s)	4.5	4.5	4.5	4.5	3.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	1.0	3.0
Lane Grp Cap (vph)	489	226	1582	708	276	1872
v/s Ratio Prot	c0.12		0.39		c0.04	0.30
v/s Ratio Perm		0.09		0.10	c0.42	
v/c Ratio	0.64	0.47	0.64	0.16	0.64	0.42
Uniform Delay, d1	33.4	32.2	11.4	7.7	6.4	5.1
Progression Factor	1.16	1.81	1.00	1.00	3.28	0.22
Incremental Delay, d2	2.3	1.3	2.0	0.5	1.0	0.2
Delay (s)	41.1	59.6	13.4	8.2	21.9	1.3
Level of Service	D	E	B	A	C	A
Approach Delay (s)	49.6		12.6			5.1
Approach LOS	D		B			A

Intersection Summary

HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1304	1167	2608	1167	1304	2608
Flt Permitted	0.95	1.00	1.00	1.00	0.23	1.00
Satd. Flow (perm)	1304	1167	2608	1167	318	2608
Volume (vph)	157	78	930	221	59	1077
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	162	80	959	228	61	1110
RTOR Reduction (vph)	0	60	0	87	0	0
Lane Group Flow (vph)	162	20	959	141	61	1110
Turn Type	pm+ov		Perm pm+pt			
Protected Phases	6	7	8		7	4
Permitted Phases	6		8 4			
Actuated Green, G (s)	17.0	21.3	55.2	55.2	64.0	64.0
Effective Green, g (s)	17.5	22.3	55.7	55.7	64.5	64.5
Actuated g/C Ratio	0.19	0.25	0.62	0.62	0.72	0.72
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	254	341	1614	722	280	1869
v/s Ratio Prot	c0.12	0.00	0.37		0.01	c0.43
v/s Ratio Perm		0.01		0.12	0.14	
v/c Ratio	0.64	0.06	0.59	0.20	0.22	0.59
Uniform Delay, d1	33.3	25.8	10.3	7.4	5.0	6.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.8	0.0	1.6	0.6	0.1	1.4
Delay (s)	37.2	25.9	12.0	8.0	5.1	7.7
Level of Service	D	C	B	A	A	A
Approach Delay (s)	33.4		11.2			7.6
Approach LOS	C		B			A

Intersection Summary

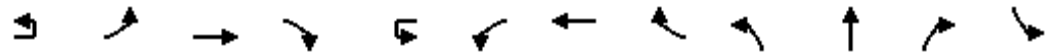
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1583	1662		1583	1663			1649			1617	
Flt Permitted	0.15	1.00		0.15	1.00			0.63			0.98	
Satd. Flow (perm)	256	1662		256	1663			1050			1594	
Volume (vph)	155	653	10	130	727	5	109	559	10	17	735	148
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	161	680	10	135	757	5	114	582	10	18	766	154
RTOR Reduction (vph)	0	1	0	0	1	0	0	1	0	0	12	0
Lane Group Flow (vph)	161	689	0	135	761	0	0	705	0	0	926	0
Conf. Peds. (#/hr)	66		13	13		66	21		26	26		21
Conf. Bikes (#/hr)			27			8						6
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			26.0			26.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			26.0			26.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.43			0.43	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	111	720		111	721			455			691	
v/s Ratio Prot		0.41			0.46							
v/s Ratio Perm	c0.63			0.53				c0.67			0.58	
v/c Ratio	1.45	0.96		1.22	1.06			1.55			1.34	
Uniform Delay, d1	17.0	16.5		17.0	17.0			17.0			17.0	
Progression Factor	1.00	1.00		1.03	1.04			2.08			1.00	
Incremental Delay, d2	245.8	24.5		123.8	37.1			255.3			162.8	
Delay (s)	262.8	40.9		141.4	54.8			290.6			179.8	
Level of Service	F	D		F	D			F			F	
Approach Delay (s)		82.9			67.8			290.6			179.8	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	148.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.50		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	161.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔	↔↔↔	↔		↔	↔↔↔	↔	↔	↔		↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		1.00	0.91	1.00		1.00	0.91	1.00	1.00	1.00		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.96		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1583	4550	1417		1583	4550	1417	1583	1604		1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.11	1.00		0.19
Satd. Flow (perm)		1583	4550	1417		1583	4550	1417	191	1604		313
Volume (vph)	31	173	1902	45	14	82	2358	168	87	302	102	377
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	31	175	1921	45	14	83	2382	170	88	305	103	381
RTOR Reduction (vph)	0	0	0	19	0	0	0	65	0	11	0	0
Lane Group Flow (vph)	0	206	1921	26	0	97	2382	105	88	397	0	381
Turn Type	Prot	Prot		Perm	Prot	Prot		pm+ov	pm+pt			pm+pt
Protected Phases	1	1	6		5	5	2	7	3	8		7
Permitted Phases				6				2	8			4
Actuated Green, G (s)		18.1	43.5	43.5		12.6	38.0	50.0	41.0	32.9		48.8
Effective Green, g (s)		18.1	44.5	44.5		12.6	39.0	51.0	43.0	34.9		50.8
Actuated g/C Ratio		0.15	0.37	0.37		0.10	0.32	0.42	0.36	0.29		0.42
Clearance Time (s)		4.0	5.0	5.0		4.0	5.0	4.0	4.0	6.0		4.0
Vehicle Extension (s)		3.0	4.4	4.4		3.0	4.3	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		239	1687	525		166	1479	649	162	466		260
v/s Ratio Prot		c0.13	0.42			0.06	c0.52	0.02	0.04	0.25		c0.15
v/s Ratio Perm				0.02				0.06	0.16			c0.47
v/c Ratio		0.86	1.14	0.05		0.58	1.61	0.16	0.54	0.85		1.47
Uniform Delay, d1		49.7	37.8	24.2		51.2	40.5	21.3	29.6	40.1		30.0
Progression Factor		1.00	1.00	1.00		0.81	1.71	3.40	1.00	1.00		1.05
Incremental Delay, d2		25.8	70.2	0.2		0.5	275.0	0.0	3.7	14.0		211.4
Delay (s)		75.5	108.0	24.4		41.7	344.1	72.4	33.3	54.2		242.8
Level of Service		E	F	C		D	F	E	C	D		F
Approach Delay (s)			103.1				315.6			50.5		
Approach LOS			F				F			D		

Intersection Summary

HCM Average Control Delay	193.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.46		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	124.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



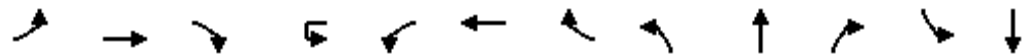
Movement	SBT	SBR
Lane Configurations	↱	
Ideal Flow (vphpl)	1700	1700
Total Lost time (s)	4.0	
Lane Util. Factor	1.00	
Frt	0.99	
Flt Protected	1.00	
Satd. Flow (prot)	1643	
Flt Permitted	1.00	
Satd. Flow (perm)	1643	
Volume (vph)	490	50
Peak-hour factor, PHF	0.99	0.99
Adj. Flow (vph)	495	51
RTOR Reduction (vph)	3	0
Lane Group Flow (vph)	543	0
Turn Type		
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	36.8	
Effective Green, g (s)	38.8	
Actuated g/C Ratio	0.32	
Clearance Time (s)	6.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	531	
v/s Ratio Prot	0.33	
v/s Ratio Perm		
v/c Ratio	1.02	
Uniform Delay, d1	40.6	
Progression Factor	1.04	
Incremental Delay, d2	18.2	
Delay (s)	60.2	
Level of Service	E	
Approach Delay (s)	135.2	
Approach LOS	F	
Intersection Summary		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘		↗	↘		↗	↕		↗	↘	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	1653		1567	1650		1583	3050		1583	3004	
Flt Permitted	0.18	1.00		0.28	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	299	1653		468	1650		185	3050		185	3004	
Volume (vph)	356	544	23	267	665	35	107	1272	267	4	1178	314
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	363	555	23	272	679	36	109	1298	272	4	1202	320
RTOR Reduction (vph)	0	1	0	0	2	0	0	20	0	0	26	0
Lane Group Flow (vph)	363	577	0	272	713	0	109	1550	0	4	1496	0
Conf. Peds. (#/hr)	29		30	30		29	48		28	28		48
Conf. Bikes (#/hr)			26			9			4			2
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	45.0	45.0		45.0	45.0		35.1	35.1		35.1	35.1	
Effective Green, g (s)	46.0	46.0		46.0	46.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.40	0.40		0.40	0.40	
Clearance Time (s)	5.0	5.0		5.0	5.0		4.9	4.9		4.9	4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	153	845		239	843		74	1220		74	1202	
v/s Ratio Prot		0.35			0.43			0.51			0.50	
v/s Ratio Perm	c1.21			0.58			c0.59			0.02		
v/c Ratio	2.37	0.68		1.14	0.85		1.47	1.27		0.05	1.24	
Uniform Delay, d1	22.0	16.5		22.0	18.9		27.0	27.0		16.6	27.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	637.4	4.4		100.5	10.2		272.1	128.4		1.4	117.1	
Delay (s)	659.4	21.0		122.5	29.2		299.1	155.4		17.9	144.1	
Level of Service	F	C		F	C		F	F		B	F	
Approach Delay (s)		267.2			54.9			164.7			143.7	
Approach LOS		F			D			F			F	

Intersection Summary

HCM Average Control Delay	156.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.98		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	134.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗		↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1583	4550	1417		1583	4550	1417	1583	3167	1417	1583	3167
Flt Permitted	0.95	1.00	1.00		0.95	1.00	1.00	0.11	1.00	1.00	0.11	1.00
Satd. Flow (perm)	1583	4550	1417		1583	4550	1417	179	3167	1417	180	3167
Volume (vph)	198	1459	290	30	50	1781	257	172	1037	192	136	1206
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	211	1552	309	32	53	1895	273	183	1103	204	145	1283
RTOR Reduction (vph)	0	0	107	0	0	0	143	0	0	126	0	0
Lane Group Flow (vph)	211	1552	202	0	85	1895	130	183	1103	78	145	1283
Turn Type	Prot		pm+ov	Prot	Prot		Perm	pm+pt		Perm	pm+pt	
Protected Phases	1	6	3	5	5	2		3	8		7	4
Permitted Phases			6				2	8		8		4
Actuated Green, G (s)	18.8	36.3	45.3		9.4	26.9	26.9	44.0	35.0	35.0	43.6	34.8
Effective Green, g (s)	18.8	37.6	47.6		9.4	28.2	28.2	47.2	37.2	37.2	46.8	37.0
Actuated g/C Ratio	0.17	0.34	0.43		0.09	0.26	0.26	0.43	0.34	0.34	0.43	0.34
Clearance Time (s)	4.0	5.3	5.0		4.0	5.3	5.3	5.0	6.2	6.2	5.0	6.2
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	4.2	4.2	3.0	3.6
Lane Grp Cap (vph)	271	1555	665		135	1166	363	204	1071	479	202	1065
v/s Ratio Prot	0.13	c0.34	0.03		0.05	c0.42		c0.08	0.35		0.06	c0.41
v/s Ratio Perm			0.12				0.09	0.30		0.06	0.24	
v/c Ratio	0.78	1.00	0.30		0.63	1.63	0.36	0.90	1.03	0.16	0.72	1.20
Uniform Delay, d1	43.6	36.2	20.4		48.6	40.9	33.5	51.4	36.4	25.5	24.9	36.5
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	13.2	22.4	0.3		8.9	285.3	2.7	35.8	35.4	0.2	11.5	101.2
Delay (s)	56.8	58.5	20.6		57.5	326.2	36.2	87.2	71.8	25.7	36.4	137.7
Level of Service	E	E	C		E	F	D	F	E	C	D	F
Approach Delay (s)		52.7				280.9			67.4			115.9
Approach LOS		D				F			E			F

Intersection Summary

HCM Average Control Delay	138.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	112.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	7
Ideal Flow (vphpl)	1700
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1417
Flt Permitted	1.00
Satd. Flow (perm)	1417
Volume (vph)	152
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	162
RTOR Reduction (vph)	23
Lane Group Flow (vph)	139
Turn Type	pm+ov
Protected Phases	1
Permitted Phases	4
Actuated Green, G (s)	53.6
Effective Green, g (s)	55.8
Actuated g/C Ratio	0.51
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	719
v/s Ratio Prot	0.03
v/s Ratio Perm	0.06
v/c Ratio	0.19
Uniform Delay, d1	14.8
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	14.9
Level of Service	B
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑			↑↑↑	↔	↔	↔↔↔	↔			
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.91			0.86	1.00	0.86	0.81	0.86			
Frt	1.00	1.00			1.00	0.85	1.00	0.98	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3072	4550			5733	1417	1362	3900	1218			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3072	4550			5733	1417	1362	3900	1218			
Volume (vph)	813	1725	0	0	1463	640	947	862	710	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	874	1855	0	0	1573	688	1018	927	763	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	12	0	10	10	0	0	0
Lane Group Flow (vph)	874	1855	0	0	1573	676	549	1644	495	0	0	0
Turn Type	Prot				Perm		Split	Perm				
Protected Phases	1	6			2		4	4				
Permitted Phases					2						4	
Actuated Green, G (s)	25.0	70.0			41.0	41.0	39.2	39.2	39.2			
Effective Green, g (s)	25.0	71.0			42.0	42.0	41.0	41.0	41.0			
Actuated g/C Ratio	0.21	0.59			0.35	0.35	0.34	0.34	0.34			
Clearance Time (s)	4.0	5.0			5.0	5.0	5.8	5.8	5.8			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	640	2692			2007	496	465	1333	416			
v/s Ratio Prot	c0.28	0.41			0.27		0.40	c0.42				
v/s Ratio Perm					c0.48						0.41	
v/c Ratio	1.37	0.69			0.78	1.36	1.18	1.23	1.19			
Uniform Delay, d1	47.5	16.9			34.9	39.0	39.5	39.5	39.5			
Progression Factor	1.04	1.44			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	170.4	0.9			3.1	176.2	101.5	111.7	107.2			
Delay (s)	219.9	25.2			38.1	215.2	141.0	151.2	146.7			
Level of Service	F	C			D	F	F	F	F			
Approach Delay (s)	87.5				92.0		148.3				0.0	
Approach LOS	F				F		F				A	

Intersection Summary

HCM Average Control Delay	110.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	127.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑		↔↔	↑↑↑					↔	↔↔	↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.81		0.97	0.91					0.91	0.86	0.91
Frt		0.98		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		6606		3072	4550					1441	2817	1289
Flt Permitted		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (perm)		6606		3072	4550					1441	2817	1289
Volume (vph)	0	1853	306	632	1948	0	0	0	0	506	383	264
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	1930	319	658	2029	0	0	0	0	527	399	275
RTOR Reduction (vph)	0	24	0	0	0	0	0	0	0	0	0	10
Lane Group Flow (vph)	0	2225	0	658	2029	0	0	0	0	310	616	265
Turn Type				Prot						Split		Perm
Protected Phases		2		1	6					4	4	
Permitted Phases												4
Actuated Green, G (s)		43.7		29.7	77.9					32.4	32.4	32.4
Effective Green, g (s)		44.4		30.2	78.6					33.4	33.4	33.4
Actuated g/C Ratio		0.37		0.25	0.65					0.28	0.28	0.28
Clearance Time (s)		4.7		4.5	4.7					5.0	5.0	5.0
Vehicle Extension (s)		3.0		4.0	3.0					4.0	4.0	4.0
Lane Grp Cap (vph)		2444		773	2980					401	784	359
v/s Ratio Prot		c0.34		c0.21	0.45					0.22	c0.22	
v/s Ratio Perm												0.21
v/c Ratio		0.91		0.85	0.68					0.77	0.79	0.74
Uniform Delay, d1		35.9		42.8	12.9					39.8	40.0	39.3
Progression Factor		1.00		0.53	1.68					1.00	1.00	1.00
Incremental Delay, d2		6.5		3.9	0.5					9.5	5.5	8.2
Delay (s)		42.4		26.7	22.2					49.3	45.5	47.5
Level of Service		D		C	C					D	D	D
Approach Delay (s)		42.4			23.3			0.0			46.9	
Approach LOS		D			C			A			D	

Intersection Summary

HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	127.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	0.97		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	
Frt	1.00	0.95		1.00	1.00			0.95			0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.98			1.00	
Satd. Flow (prot)	1583	1537		1583	1661			1513			1631	
Flt Permitted	0.18	1.00		0.15	1.00			0.62			0.93	
Satd. Flow (perm)	303	1537		247	1661			963			1524	
Volume (vph)	19	612	291	394	611	10	387	132	336	29	297	32
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	20	651	310	419	650	11	412	140	357	31	316	34
RTOR Reduction (vph)	0	29	0	0	1	0	0	39	0	0	6	0
Lane Group Flow (vph)	20	932	0	419	660	0	0	870	0	0	375	0
Conf. Peds. (#/hr)	10		27	27		10	17		16	16		17
Conf. Bikes (#/hr)			30			16			3			10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	27.0	27.0		27.0	27.0			25.0			25.0	
Effective Green, g (s)	27.0	27.0		27.0	27.0			25.0			25.0	
Actuated g/C Ratio	0.45	0.45		0.45	0.45			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	136	692		111	747			401			635	
v/s Ratio Prot		0.61			0.40							
v/s Ratio Perm	0.07			c1.70				c0.90			0.25	
v/c Ratio	0.15	1.35		3.77	0.88			2.17			0.59	
Uniform Delay, d1	9.7	16.5		16.5	15.1			17.5			13.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	2.3	165.8		1270.3	14.3			534.4			1.5	
Delay (s)	12.0	182.3		1286.8	29.4			551.9			15.0	
Level of Service	B	F		F	C			F			B	
Approach Delay (s)		178.9			517.2			551.9			15.0	
Approach LOS		F			F			F			B	

Intersection Summary

HCM Average Control Delay	370.5	HCM Level of Service	F
HCM Volume to Capacity ratio	3.00		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	171.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖		↖	↖↖↖		↖	↖		↖	↖	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Fr _t	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.95	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4519		1583	4506		1583	1616		1583	1580	
Fl _t Permitted	0.08	1.00		0.08	1.00		0.10	1.00		0.47	1.00	
Satd. Flow (perm)	126	4519		139	4506		159	1616		784	1580	
Volume (vph)	138	1596	75	40	1620	110	44	198	50	86	392	206
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	144	1662	78	42	1688	115	46	206	52	90	408	215
RTOR Reduction (vph)	0	4	0	0	6	0	0	8	0	0	14	0
Lane Group Flow (vph)	144	1736	0	42	1797	0	46	250	0	90	609	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		2		2		4		4		4	
Permitted Phases	2		2		2		4		4		4	
Actuated Green, G (s)	69.6	69.6		69.6	69.6		41.0	41.0		41.0	41.0	
Effective Green, g (s)	70.0	70.0		70.0	70.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio	0.58	0.58		0.58	0.58		0.35	0.35		0.35	0.35	
Clearance Time (s)	4.4	4.4		4.4	4.4		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	2636		81	2629		56	566		274	553	
v/s Ratio Prot		0.38			0.40			0.15			c0.39	
v/s Ratio Perm	c1.15			0.30			0.29			0.11		
v/c Ratio	1.95	0.66		0.52	0.68		0.82	0.44		0.33	1.10	
Uniform Delay, d ₁	25.0	16.9		14.9	17.3		35.6	30.0		28.6	39.0	
Progression Factor	1.09	1.03		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d ₂	430.1	0.1		21.7	1.5		60.2	0.6		0.7	69.2	
Delay (s)	457.5	17.5		36.7	18.8		95.8	30.5		29.3	108.2	
Level of Service	F	B		D	B		F	C		C	F	
Approach Delay (s)		51.2			19.2			40.4			98.2	
Approach LOS		D			B			D			F	

Intersection Summary

HCM Average Control Delay	45.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	104.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1583	4550	3167	1417	3072	1417
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1583	4550	3167	1417	3072	1417
Volume (vph)	358	1379	1343	729	838	355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	377	1452	1414	767	882	374
RTOR Reduction (vph)	0	0	0	6	0	5
Lane Group Flow (vph)	377	1452	1414	761	882	369
Turn Type	Prot		pm+ov		pt+ov	
Protected Phases	5	2	6	4	4	4 5
Permitted Phases				6		
Actuated Green, G (s)	12.5	40.6	37.1	66.5	29.4	45.5
Effective Green, g (s)	12.0	40.5	37.0	66.0	29.0	45.0
Actuated g/C Ratio	0.13	0.45	0.41	0.73	0.32	0.50
Clearance Time (s)	3.5	3.9	3.9	3.6	3.6	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	211	2048	1302	1102	990	709
v/s Ratio Prot	c0.24	c0.32	c0.45	0.22	c0.29	0.26
v/s Ratio Perm				0.31		
v/c Ratio	1.79	0.71	1.09	0.69	0.89	0.52
Uniform Delay, d1	39.0	20.0	26.5	6.5	29.0	15.2
Progression Factor	1.00	1.00	0.63	0.34	1.00	1.00
Incremental Delay, d2	372.4	2.1	40.2	0.2	10.1	0.7
Delay (s)	411.4	22.1	56.9	2.4	39.1	15.9
Level of Service	F	C	E	A	D	B
Approach Delay (s)		102.4	37.7		32.2	
Approach LOS		F	D		C	

Intersection Summary

HCM Average Control Delay	58.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↖		↕	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frbp, ped/bikes	1.00	0.99		1.00	0.99			1.00	0.96		1.00	0.97
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99	1.00		0.99	1.00
Frt	1.00	0.99		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.99	1.00
Satd. Flow (prot)	1276	2538		1285	2556			1340	1120		1343	1127
Flt Permitted	0.18	1.00		0.15	1.00			0.89	1.00		0.92	1.00
Satd. Flow (perm)	247	2538		198	2556			1216	1120		1249	1127
Volume (vph)	19	1104	98	62	1003	63	30	54	71	15	34	44
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	22	1284	114	72	1166	73	35	63	83	17	40	51
RTOR Reduction (vph)	0	5	0	0	3	0	0	0	20	0	0	27
Lane Group Flow (vph)	22	1393	0	72	1236	0	0	98	63	0	57	24
Conf. Peds. (#/hr)	72		69	69		72	20		26	26		20
Conf. Bikes (#/hr)						1			3			2
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	62.0	62.0		62.0	62.0			19.0	19.0		19.0	19.0
Effective Green, g (s)	62.5	62.5		62.5	62.5			19.5	19.5		19.5	19.5
Actuated g/C Ratio	0.69	0.69		0.69	0.69			0.22	0.22		0.22	0.22
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5	4.5		4.5	4.5
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	172	1763		138	1775			263	243		271	244
v/s Ratio Prot		c0.55			0.48							
v/s Ratio Perm	0.09			0.36				c0.08	0.06		0.05	0.02
v/c Ratio	0.13	0.79		0.52	0.70			0.37	0.26		0.21	0.10
Uniform Delay, d1	4.6	9.3		6.6	8.1			30.0	29.3		28.9	28.2
Progression Factor	0.49	0.53		1.81	1.86			1.00	1.00		1.00	1.00
Incremental Delay, d2	1.3	3.2		6.8	1.1			0.3	0.2		0.1	0.1
Delay (s)	3.6	8.2		18.7	16.3			30.4	29.5		29.1	28.3
Level of Service	A	A		B	B			C	C		C	C
Approach Delay (s)		8.1			16.4			30.0			28.7	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕			↕	↗		↖	↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99			1.00	0.96		1.00	0.97
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99	1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.99	1.00
Satd. Flow (prot)	1279	2588		1292	2552			1324	1121		1360	1133
Flt Permitted	0.13	1.00		0.13	1.00			0.87	1.00		0.97	1.00
Satd. Flow (perm)	178	2588		176	2552			1178	1121		1334	1133
Volume (vph)	29	1338	34	50	1293	69	15	11	108	9	68	55
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	31	1439	37	54	1390	74	16	12	116	10	73	59
RTOR Reduction (vph)	0	1	0	0	3	0	0	0	13	0	0	12
Lane Group Flow (vph)	31	1475	0	54	1461	0	0	28	103	0	83	47
Conf. Peds. (#/hr)	108		55	55		108	16		25	25		16
Conf. Bikes (#/hr)			3			7			3			1
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	62.0	62.0		62.0	62.0			19.0	19.0		19.0	19.0
Effective Green, g (s)	62.5	62.5		62.5	62.5			19.5	19.5		19.5	19.5
Actuated g/C Ratio	0.69	0.69		0.69	0.69			0.22	0.22		0.22	0.22
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5	4.5		4.5	4.5
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	124	1797		122	1772			255	243		289	245
v/s Ratio Prot		0.57			c0.57							
v/s Ratio Perm	0.17			0.31				0.02	c0.09		0.06	0.04
v/c Ratio	0.25	0.82		0.44	0.82			0.11	0.42		0.29	0.19
Uniform Delay, d1	5.1	9.8		6.1	9.8			28.3	30.4		29.4	28.8
Progression Factor	0.42	0.48		1.85	1.81			1.00	1.00		1.00	1.00
Incremental Delay, d2	3.9	3.6		3.4	1.4			0.1	0.4		0.2	0.1
Delay (s)	6.0	8.3		14.6	19.2			28.4	30.8		29.6	29.0
Level of Service	A	A		B	B			C	C		C	C
Approach Delay (s)		8.3			19.0			30.3			29.4	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Appendix C-6:
Future Year 2035 Alternative 4 Level of Service Worksheets



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↑↑	↖		↑↑	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95	1.00		0.95	1.00
Frt	1.00	0.98		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	1583	4443		1583	4538			3166	1417		3155	1417
Flt Permitted	0.11	1.00		0.95	1.00			0.95	1.00		0.71	1.00
Satd. Flow (perm)	177	4443		1583	4538			3019	1417		2250	1417
Volume (vph)	109	1496	278	82	1709	29	2	785	124	71	915	538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	115	1575	293	86	1799	31	2	826	131	75	963	566
RTOR Reduction (vph)	0	29	0	0	2	0	0	0	82	0	0	7
Lane Group Flow (vph)	115	1839	0	86	1828	0	0	828	49	0	1038	559
Turn Type	Perm		Prot		Perm		Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	6		5		2		8		8		4	
Permitted Phases	6						8		8		4	
Actuated Green, G (s)	37.6	37.6		6.4	48.0			33.5	33.5		33.5	33.5
Effective Green, g (s)	37.6	37.6		6.4	48.0			34.0	34.0		34.0	34.0
Actuated g/C Ratio	0.42	0.42		0.07	0.53			0.38	0.38		0.38	0.38
Clearance Time (s)	4.0	4.0		4.0	4.0			4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	74	1856		113	2420			1141	535		850	535
v/s Ratio Prot		0.41		0.05	c0.40							
v/s Ratio Perm	c0.65							0.27	0.03		c0.46	0.39
v/c Ratio	1.55	0.99		0.76	0.76			0.73	0.09		1.22	1.05
Uniform Delay, d1	26.2	26.0		41.0	16.4			24.0	18.1		28.0	28.0
Progression Factor	1.58	1.63		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	278.9	12.6		25.6	2.3			4.0	0.3		110.1	51.2
Delay (s)	320.3	55.1		66.6	18.7			28.0	18.4		138.1	79.2
Level of Service	F	E		E	B			C	B		F	E
Approach Delay (s)		70.5			20.8			26.7			117.3	
Approach LOS		E			C			C			F	

Intersection Summary

HCM Average Control Delay	60.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: 6th St & Western Ave

2/23/2010

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕			↕↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0			4.0			4.0	4.0
Lane Util. Factor		0.95			0.95			0.95			0.95	1.00
Frbp, ped/bikes		1.00			0.99			1.00			1.00	0.83
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		0.99			0.99			0.99			1.00	0.85
Flt Protected		1.00			1.00			1.00			1.00	1.00
Satd. Flow (prot)		3127			3083			3134			3167	1171
Flt Permitted		1.00			1.00			1.00			1.00	1.00
Satd. Flow (perm)		3127			3083			3134			3167	1171
Volume (vph)	0	1079	60	0	1106	96	0	1414	53	0	1728	114
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	1090	61	0	1117	97	0	1428	54	0	1745	115
RTOR Reduction (vph)	0	2	0	0	5	0	0	3	0	0	0	14
Lane Group Flow (vph)	0	1149	0	0	1209	0	0	1479	0	0	1745	101
Conf. Peds. (#/hr)	76		47	47		76	70		83	83		70
Conf. Bikes (#/hr)			7			7			12			9
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)		40.2			40.2			40.2			40.2	40.2
Effective Green, g (s)		41.0			41.0			41.0			41.0	41.0
Actuated g/C Ratio		0.46			0.46			0.46			0.46	0.46
Clearance Time (s)		4.8			4.8			4.8			4.8	4.8
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1425			1404			1428			1443	533
v/s Ratio Prot		0.37			c0.39			0.47			c0.55	
v/s Ratio Perm												0.09
v/c Ratio		0.81			0.86			1.04			1.21	0.19
Uniform Delay, d1		21.1			22.0			24.5			24.5	14.6
Progression Factor		1.00			1.00			0.60			1.00	1.00
Incremental Delay, d2		5.0			7.1			18.9			100.9	0.8
Delay (s)		26.1			29.1			33.7			125.4	15.4
Level of Service		C			C			C			F	B
Approach Delay (s)		26.1			29.1			33.7			118.6	
Approach LOS		C			C			C			F	

Intersection Summary

HCM Average Control Delay	58.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	111.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↗		↖	↕↕↗		↖	↕↗		↖	↕↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4475		1583	4470		1583	3130		1583	2988	
Flt Permitted	0.14	1.00		0.14	1.00		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	230	4475		230	4470		230	3130		230	2988	
Volume (vph)	193	1321	64	157	1701	58	251	1128	28	194	1295	253
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	208	1420	69	169	1829	62	270	1213	30	209	1392	272
RTOR Reduction (vph)	0	6	0	0	4	0	0	2	0	0	18	0
Lane Group Flow (vph)	208	1483	0	169	1887	0	270	1241	0	209	1646	0
Conf. Peds. (#/hr)	529		124	124		529	153		349	349		153
Conf. Bikes (#/hr)			4			6			8			9
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	35.6	27.6		35.6	27.6		35.8	27.8		35.8	27.8	
Effective Green, g (s)	37.0	29.0		37.0	29.0		37.0	29.0		37.0	29.0	
Actuated g/C Ratio	0.41	0.32		0.41	0.32		0.41	0.32		0.41	0.32	
Clearance Time (s)	4.0	5.4		4.0	5.4		4.0	5.2		4.0	5.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	215	1442		215	1440		215	1009		215	963	
v/s Ratio Prot	c0.09	0.33		0.07	c0.42		c0.11	0.40		0.09	c0.55	
v/s Ratio Perm	0.31			0.25			0.41			0.31		
v/c Ratio	0.97	1.03		0.79	1.31		1.26	1.23		0.97	1.71	
Uniform Delay, d1	43.0	30.5		20.8	30.5		43.2	30.5		43.0	30.5	
Progression Factor	1.91	0.91		0.90	0.89		1.15	1.18		1.61	1.45	
Incremental Delay, d2	31.1	23.2		9.8	142.4		125.3	106.0		12.5	319.4	
Delay (s)	113.2	51.0		28.6	169.5		175.1	141.8		82.0	363.8	
Level of Service	F	D		C	F		F	F		F	F	
Approach Delay (s)		58.6			157.9			147.8			332.3	
Approach LOS		E			F			F			F	

Intersection Summary

HCM Average Control Delay	177.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	129.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.97		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3109		1583	3062		1583	3159		1583	3156	
Flt Permitted	0.31	1.00		0.29	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	520	3109		484	3062		163	3159		163	3156	
Volume (vph)	57	569	79	64	475	134	43	1332	22	124	1518	34
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	64	639	89	72	534	151	48	1497	25	139	1706	38
RTOR Reduction (vph)	0	3	0	0	7	0	0	1	0	0	2	0
Lane Group Flow (vph)	64	725	0	72	678	0	48	1521	0	139	1742	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	8			4			6			2		
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	40.4	40.4		40.4	40.4		40.3	40.3		40.3	40.3	
Effective Green, g (s)	41.0	41.0		41.0	41.0		41.0	41.0		41.0	41.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46		0.46	0.46		0.46	0.46	
Clearance Time (s)	4.6	4.6		4.6	4.6		4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	237	1416		220	1395		74	1439		74	1438	
v/s Ratio Prot	c0.23			0.22			0.48			0.55		
v/s Ratio Perm	0.12			0.15			0.30			c0.85		
v/c Ratio	0.27	0.51		0.33	0.49		0.65	1.06		1.88	1.21	
Uniform Delay, d1	15.2	17.4		15.7	17.1		18.9	24.5		24.5	24.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.65	0.65	
Incremental Delay, d2	2.8	1.3		3.9	1.2		36.5	40.4		399.9	95.9	
Delay (s)	18.0	18.7		19.6	18.4		55.4	64.9		415.8	111.8	
Level of Service	B	B		B	B		E	E		F	F	
Approach Delay (s)	18.7			18.5			64.6			134.3		
Approach LOS	B			B			E			F		

Intersection Summary

HCM Average Control Delay	76.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕↕↕		↗	↕↕↕		↗	↕↕	↗	↗	↕↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Fr _t	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4519		1583	4501		1583	3167	1417	1583	3167	1417
Fl _t Permitted	0.11	1.00		0.11	1.00		0.12	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	184	4519		192	4501		196	3167	1417	188	3167	1417
Volume (vph)	71	1928	90	51	1743	135	91	1140	55	125	1352	135
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	73	1988	93	53	1797	139	94	1175	57	129	1394	139
RTOR Reduction (vph)	0	5	0	0	8	0	0	0	32	0	0	46
Lane Group Flow (vph)	73	2076	0	53	1928	0	94	1175	25	129	1394	93
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases	6			2			8		8	4		4
Actuated Green, G (s)	42.6	35.2		39.8	33.8		39.3	33.0	39.0	42.3	34.5	41.9
Effective Green, g (s)	43.6	36.2		40.8	34.8		40.3	34.0	40.0	43.3	35.5	42.9
Actuated g/C Ratio	0.44	0.36		0.41	0.35		0.40	0.34	0.40	0.43	0.36	0.43
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	184	1636		162	1566		166	1077	623	190	1124	665
v/s Ratio Prot	c0.03	c0.46		0.02	0.43		0.04	0.37	0.00	c0.05	c0.44	0.01
v/s Ratio Perm	0.14			0.11			0.19		0.01	0.24		0.06
v/c Ratio	0.40	1.27		0.33	1.23		0.57	1.09	0.04	0.68	1.24	0.14
Uniform Delay, d ₁	23.2	31.9		45.7	32.6		24.7	33.0	18.3	23.0	32.2	17.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d ₂	1.4	126.0		1.2	109.7		4.4	55.7	0.0	9.3	115.8	0.1
Delay (s)	24.6	157.9		46.9	142.3		29.1	88.7	18.3	32.3	148.1	17.4
Level of Service	C	F		D	F		C	F	B	C	F	B
Approach Delay (s)		153.4			139.7			81.4			128.2	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	130.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	108.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕		↖	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4515		1583	4509		1583	3141		1583	3090	
Flt Permitted	0.09	1.00		0.09	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	152	4515		152	4509		175	3141		175	3090	
Volume (vph)	215	1759	95	107	2116	134	119	1046	59	86	1340	258
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	226	1852	100	113	2227	141	125	1101	62	91	1411	272
RTOR Reduction (vph)	0	6	0	0	8	0	0	3	0	0	1	0
Lane Group Flow (vph)	226	1946	0	113	2360	0	125	1160	0	91	1682	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	6			2			8			4		
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	43.5	43.5		43.5	43.5		37.5	37.5		37.5	37.5	
Effective Green, g (s)	44.0	44.0		44.0	44.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.49	0.49		0.49	0.49		0.42	0.42		0.42	0.42	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	2207		74	2204		74	1326		74	1305	
v/s Ratio Prot		0.43			0.52			0.37			0.54	
v/s Ratio Perm	c1.49			0.75			c0.71			0.52		
v/c Ratio	3.05	0.88		1.53	1.07		1.69	0.87		1.23	1.29	
Uniform Delay, d1	23.0	20.7		23.0	23.0		26.0	23.8		26.0	26.0	
Progression Factor	1.42	1.47		1.16	1.17		1.00	1.00		1.00	1.00	
Incremental Delay, d2	945.4	3.4		243.3	33.0		361.3	8.3		178.7	135.8	
Delay (s)	978.2	33.8		269.9	59.8		387.3	32.1		204.7	161.8	
Level of Service	F	C		F	E		F	C		F	F	
Approach Delay (s)		131.8			69.4			66.5			164.0	
Approach LOS		F			E			E			F	

Intersection Summary

HCM Average Control Delay	108.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	134.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↑	↗		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		1.00	
Satd. Flow (prot)	1583	4535		1583	4528			1638	1417		1579	
Flt Permitted	0.07	1.00		0.07	1.00			0.63	1.00		0.97	
Satd. Flow (perm)	110	4535		110	4528			1053	1417		1543	
Volume (vph)	30	1889	42	82	2442	80	66	123	142	13	120	78
Peak-hour factor, PHF	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Adj. Flow (vph)	38	2391	53	104	3091	101	84	156	180	16	152	99
RTOR Reduction (vph)	0	2	0	0	3	0	0	0	2	0	1	0
Lane Group Flow (vph)	38	2442	0	104	3189	0	0	240	178	0	266	0
Turn Type	Perm		Perm		Perm		Perm		Perm	Perm		
Protected Phases	6		2		2		8		8	4		
Permitted Phases	6		2		8		8		8	4		
Actuated Green, G (s)	60.4	60.4		60.4	60.4			21.1	21.1		21.1	
Effective Green, g (s)	60.4	60.4		60.4	60.4			21.6	21.6		21.6	
Actuated g/C Ratio	0.67	0.67		0.67	0.67			0.24	0.24		0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.5	4.5		4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	74	3043		74	3039			253	340		370	
v/s Ratio Prot	0.54		0.70									
v/s Ratio Perm	0.34		c0.94				c0.23		0.13	0.17		
v/c Ratio	0.51		0.80		1.41		1.05		0.95	0.52		0.72
Uniform Delay, d1	7.4		10.5		14.8		14.8		33.7	29.7		31.4
Progression Factor	1.00		1.00		1.11		1.15		1.00	1.00		1.00
Incremental Delay, d2	23.2		2.3		213.1		26.7		42.1	1.5		6.6
Delay (s)	30.6		12.9		229.5		43.7		75.8	31.2		38.0
Level of Service	C		B		F		D		E	C		D
Approach Delay (s)			13.2		49.5		56.6			38.0		
Approach LOS			B		D		E			D		

Intersection Summary			
HCM Average Control Delay	35.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵↵↵	↵
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.91
Frbp, ped/bikes	0.98		1.00	1.00	0.96	0.89
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	0.97	0.85
Flt Protected	1.00		0.95	1.00	0.96	1.00
Satd. Flow (prot)	4347		1583	4550	2888	1150
Flt Permitted	1.00		0.09	1.00	0.96	1.00
Satd. Flow (perm)	4347		150	4550	2888	1150
Volume (vph)	1419	240	616	1831	643	580
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1478	250	642	1907	670	604
RTOR Reduction (vph)	26	0	0	0	33	2
Lane Group Flow (vph)	1702	0	642	1907	839	400
Conf. Peds. (#/hr)		153	153			99
Conf. Bikes (#/hr)						2
Turn Type			pm+pt		pm+ov	
Protected Phases	6		5	2	4	5
Permitted Phases			2			4
Actuated Green, G (s)	39.3		51.3	51.3	29.0	37.0
Effective Green, g (s)	40.3		52.3	52.3	29.7	37.7
Actuated g/C Ratio	0.45		0.58	0.58	0.33	0.42
Clearance Time (s)	5.0		4.0	5.0	4.7	4.0
Vehicle Extension (s)	3.0		2.0	3.0	2.0	2.0
Lane Grp Cap (vph)	1946		215	2644	953	533
v/s Ratio Prot	0.39		c0.27	0.42	c0.29	0.07
v/s Ratio Perm			c1.47			0.28
v/c Ratio	0.87		2.99	0.72	0.88	0.75
Uniform Delay, d1	22.6		23.7	13.6	28.5	22.2
Progression Factor	1.00		1.00	1.00	0.40	0.25
Incremental Delay, d2	5.8		906.1	1.7	7.7	4.1
Delay (s)	28.4		929.8	15.3	18.9	9.7
Level of Service	C		F	B	B	A
Approach Delay (s)	28.4			245.7	16.0	
Approach LOS	C			F	B	

Intersection Summary

HCM Average Control Delay	125.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.18		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↕		↖	↕	↖	↖	↕		↖	↕		
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95		
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	1.00		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1583	3147		1583	1667	1417	1583	3109		1583	3163		
Flt Permitted	0.40	1.00		0.46	1.00	1.00	0.29	1.00		0.15	1.00		
Satd. Flow (perm)	665	3147		771	1667	1417	488	3109		254	3163		
Volume (vph)	7	338	14	212	284	105	136	1071	149	26	794	7	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Adj. Flow (vph)	7	352	15	221	296	109	142	1116	155	27	827	7	
RTOR Reduction (vph)	0	0	0	0	0	68	0	12	0	0	1	0	
Lane Group Flow (vph)	7	367	0	221	296	41	142	1259	0	27	833	0	
Turn Type	Perm			Perm			Perm	Perm		Perm			
Protected Phases	8			4			6			2			
Permitted Phases	8			4			6			2			
Actuated Green, G (s)	26.4	26.4		26.4	26.4	26.4	54.3	54.3		54.3	54.3		
Effective Green, g (s)	27.0	27.0		27.0	27.0	27.0	55.0	55.0		55.0	55.0		
Actuated g/C Ratio	0.30	0.30		0.30	0.30	0.30	0.61	0.61		0.61	0.61		
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.7	4.7		4.7	4.7		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	200	944		231	500	425	298	1900		155	1933		
v/s Ratio Prot		0.12			0.18			c0.40			0.26		
v/s Ratio Perm	0.01			c0.29		0.03	0.29			0.11			
v/c Ratio	0.04	0.39		0.96	0.59	0.10	0.48	0.66		0.17	0.43		
Uniform Delay, d1	22.3	25.0		30.9	26.8	22.7	9.6	11.4		7.6	9.2		
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.75	1.96		0.21	0.31		
Incremental Delay, d2	0.3	1.2		49.0	5.1	0.5	0.5	0.2		0.2	0.1		
Delay (s)	22.6	26.2		79.9	31.9	23.2	17.3	22.6		1.8	2.9		
Level of Service	C			E		C		C		A		A	
Approach Delay (s)		26.1			47.3			22.1			2.9		
Approach LOS		C			D			C			A		

Intersection Summary

HCM Average Control Delay	22.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↗↖		↖	↗↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4489		1583	4546		1583	3145		1583	3167	1417
Flt Permitted	0.15	1.00		0.95	1.00		0.13	1.00		0.15	1.00	1.00
Satd. Flow (perm)	248	4489		1583	4546		223	3145		257	3167	1417
Volume (vph)	70	1678	164	140	2682	17	181	1262	61	58	1127	144
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	77	1844	180	154	2947	19	199	1387	67	64	1238	158
RTOR Reduction (vph)	0	13	0	0	1	0	0	3	0	0	0	107
Lane Group Flow (vph)	77	2011	0	154	2965	0	199	1451	0	64	1238	51
Turn Type	pm+pt			Prot			pm+pt			pm+pt		Perm
Protected Phases	5	2		1	6		7	4		3	8	8
Permitted Phases	2						4			8		8
Actuated Green, G (s)	31.3	26.0		11.1	30.9		39.5	29.5		30.9	24.9	24.9
Effective Green, g (s)	32.6	26.9		10.6	31.8		40.5	30.5		31.9	25.9	25.9
Actuated g/C Ratio	0.36	0.30		0.12	0.35		0.45	0.34		0.35	0.29	0.29
Clearance Time (s)	4.4	4.9		3.5	4.9		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	174	1342		186	1606		261	1066		179	911	408
v/s Ratio Prot	0.03	0.45		c0.10	c0.65		c0.09	c0.46		0.02	0.39	
v/s Ratio Perm	0.13						0.25			0.10		0.04
v/c Ratio	0.44	1.50		0.83	1.85		0.76	1.36		0.36	1.36	0.13
Uniform Delay, d1	23.3	31.6		38.8	29.1		20.5	29.8		40.9	32.0	23.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.84	0.79	0.49
Incremental Delay, d2	1.8	228.4		25.1	383.3		12.4	168.5		1.1	168.3	0.6
Delay (s)	25.1	260.0		63.9	412.4		32.9	198.3		35.6	193.4	12.2
Level of Service	C			E			C			D		F
Approach Delay (s)	251.4			395.2			178.4			166.9		
Approach LOS	F			F			F			F		

Intersection Summary

HCM Average Control Delay	275.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.51		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	122.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 11: Wilshire Blvd & Lucerne Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↑	↗		↖	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.99	
Satd. Flow (prot)	1583	4524		1583	4533			1627	1417		1650	
Flt Permitted	0.09	1.00		0.09	1.00			0.98	1.00		0.99	
Satd. Flow (perm)	146	4524		146	4533			1627	1417		1650	
Volume (vph)	22	1602	64	52	2221	55	142	149	20	34	137	0
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	1652	66	54	2290	57	146	154	21	35	141	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	16	0	0	0
Lane Group Flow (vph)	23	1718	0	54	2344	0	0	300	5	0	176	0
Turn Type	Perm		Perm		Split		Perm		Split		Perm	
Protected Phases	6		2		4		4		3		3	
Permitted Phases	6		2				4				3	
Actuated Green, G (s)	43.7	43.7		43.7	43.7			19.0	19.0		10.4	
Effective Green, g (s)	45.6	45.6		45.6	45.6			20.5	20.5		11.9	
Actuated g/C Ratio	0.51	0.51		0.51	0.51			0.23	0.23		0.13	
Clearance Time (s)	5.9	5.9		5.9	5.9			5.5	5.5		5.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	74	2292		74	2297			371	323		218	
v/s Ratio Prot		0.38			c0.52			c0.18			c0.11	
v/s Ratio Perm	0.16			0.37				0.00				
v/c Ratio	0.31	0.75		0.73	1.02			0.81	0.01		0.81	
Uniform Delay, d1	13.0	17.7		17.4	22.2			32.9	26.9		37.9	
Progression Factor	0.69	0.57		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	7.2	1.6		47.3	24.1			12.2	0.0		19.3	
Delay (s)	16.2	11.6		64.7	46.3			45.1	26.9		57.2	
Level of Service	B	B		E	D			D	C		E	
Approach Delay (s)		11.6			46.7			43.9			57.2	
Approach LOS		B			D			D			E	

Intersection Summary

HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.98			0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.97	1.00
Satd. Flow (prot)	1583	4527		1583	4474			1608			1609	1417
Flt Permitted	0.10	1.00		0.11	1.00			0.99			0.97	1.00
Satd. Flow (perm)	163	4527		188	4474			1608			1609	1417
Volume (vph)	81	1322	46	16	2033	255	48	121	36	314	126	324
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	83	1349	47	16	2074	260	49	123	37	320	129	331
RTOR Reduction (vph)	0	4	0	0	17	0	0	9	0	0	0	92
Lane Group Flow (vph)	83	1392	0	16	2317	0	0	200	0	0	449	239
Turn Type	Perm		Perm		Split		Split		Split		Perm	
Protected Phases	6		2		3		3		4		4	
Permitted Phases	6		2								4	
Actuated Green, G (s)	39.5	39.5		39.5	39.5			9.6			25.0	25.0
Effective Green, g (s)	41.0	41.0		41.0	41.0			11.0			26.0	26.0
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.12			0.29	0.29
Clearance Time (s)	5.5	5.5		5.5	5.5			5.4			5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	74	2062		86	2038			197			465	409
v/s Ratio Prot		0.31			c0.52			c0.12			c0.28	
v/s Ratio Perm	0.51			0.09								0.17
v/c Ratio	1.12	0.68		0.19	1.14			1.02			0.97	0.59
Uniform Delay, d1	24.5	19.3		14.6	24.5			39.5			31.6	27.4
Progression Factor	1.00	1.00		1.42	1.16			1.00			1.00	1.00
Incremental Delay, d2	141.5	1.8		0.4	62.2			68.4			32.7	2.1
Delay (s)	166.0	21.1		21.1	90.7			107.9			64.2	29.5
Level of Service	F	C		C	F			F			E	C
Approach Delay (s)		29.2			90.2			107.9			49.5	
Approach LOS		C			F			F			D	

Intersection Summary

HCM Average Control Delay	65.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: Wilshire Blvd & Sycamore Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑↑↑		↑	↑↑↑			↑			↑		
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0		
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00		
Frbp, ped/bikes		1.00		1.00	1.00			0.99			0.99		
Flpb, ped/bikes		1.00		0.99	1.00			1.00			1.00		
Frt		0.99		1.00	1.00			0.95			0.96		
Flt Protected		1.00		0.95	1.00			0.98			1.00		
Satd. Flow (prot)		4235		1476	4265			1431			1484		
Flt Permitted		1.00		0.15	1.00			0.70			0.98		
Satd. Flow (perm)		4235		230	4265			1027			1460		
Volume (vph)	0	1341	60	43	2035	37	55	21	51	9	94	50	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	0	1427	64	46	2165	39	59	22	54	10	100	53	
RTOR Reduction (vph)	0	3	0	0	1	0	0	27	0	0	4	0	
Lane Group Flow (vph)	0	1488	0	46	2203	0	0	108	0	0	159	0	
Confl. Peds. (#/hr)	25		36	36		25	8		5	5		8	
Confl. Bikes (#/hr)			5			4							
Turn Type				Perm			Perm				Perm		
Protected Phases		6			2			8				4	
Permitted Phases				2			8			4			
Actuated Green, G (s)		66.5		66.5	66.5			16.0			16.0		
Effective Green, g (s)		66.0		66.0	66.0			16.0			16.0		
Actuated g/C Ratio		0.73		0.73	0.73			0.18			0.18		
Clearance Time (s)		3.5		3.5	3.5			4.0			4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0		
Lane Grp Cap (vph)		3106		169	3128			183			260		
v/s Ratio Prot		0.35			c0.52								
v/s Ratio Perm				0.20				0.11			c0.11		
v/c Ratio		0.48		0.27	0.70			0.59			0.61		
Uniform Delay, d1		4.9		4.0	6.6			34.0			34.1		
Progression Factor		0.32		1.00	1.00			1.00			1.00		
Incremental Delay, d2		0.0		3.9	1.4			4.8			4.2		
Delay (s)		1.6		7.9	8.0			38.8			38.3		
Level of Service		A		A	A			D			D		
Approach Delay (s)		1.6			8.0			38.8			38.3		
Approach LOS		A			A			D			D		
Intersection Summary													
HCM Average Control Delay			7.9									HCM Level of Service	A
HCM Volume to Capacity ratio			0.69										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			80.2%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↗↗	↶	↶	↗↗		↶	↗↗↗		↶	↗↗↗	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2980	1333	1490	2979		1490	4264		1490	4214	
Flt Permitted	0.13	1.00	1.00	0.12	1.00		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	202	2980	1333	194	2979		216	4264		213	4214	
Volume (vph)	76	995	94	166	1678	6	90	1674	50	130	2194	262
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	80	1047	99	175	1766	6	95	1762	53	137	2309	276
RTOR Reduction (vph)	0	0	20	0	0	0	0	3	0	0	16	0
Lane Group Flow (vph)	80	1047	79	175	1772	0	95	1812	0	137	2569	0
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases	8		8	4			6			2		
Actuated Green, G (s)	35.6	30.0	36.5	38.4	31.4		34.5	28.0		35.5	28.5	
Effective Green, g (s)	36.6	31.0	37.5	39.4	32.4		35.5	29.0		36.5	29.5	
Actuated g/C Ratio	0.41	0.34	0.42	0.44	0.36		0.39	0.32		0.41	0.33	
Clearance Time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	4.8	3.0	3.0	4.6		3.0	4.3		3.0	5.5	
Lane Grp Cap (vph)	162	1026	615	186	1072		177	1374		186	1381	
v/s Ratio Prot	0.03	0.35	0.01	c0.07	c0.59		0.04	0.42		c0.06	c0.61	
v/s Ratio Perm	0.17		0.05	0.34			0.17			0.24		
v/c Ratio	0.49	1.02	0.13	0.94	1.65		0.54	1.32		0.74	1.86	
Uniform Delay, d1	22.1	29.5	16.2	20.2	28.8		41.4	30.5		42.1	30.2	
Progression Factor	0.67	0.74	0.57	1.00	1.00		1.54	0.36		1.73	1.47	
Incremental Delay, d2	1.6	28.3	0.1	49.0	298.0		0.3	143.8		1.4	387.3	
Delay (s)	16.4	50.3	9.4	69.2	326.8		64.1	154.8		74.4	431.9	
Level of Service	B	D	A	E	F		E	F		E	F	
Approach Delay (s)		44.7			303.7			150.3			413.9	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	263.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	136.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2980	1333	1490	2970		1490	4253		1490	4280	
Flt Permitted	0.11	1.00	1.00	0.10	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	179	2980	1333	161	2970		161	4253		161	4280	
Volume (vph)	22	1076	161	158	1495	36	81	1934	93	92	2221	7
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	22	1098	164	161	1526	37	83	1973	95	94	2266	7
RTOR Reduction (vph)	0	0	8	0	1	0	0	6	0	0	1	0
Lane Group Flow (vph)	22	1098	156	161	1562	0	83	2062	0	94	2272	0
Turn Type	Perm		Perm	pm+pt		Perm		Perm		Perm		
Protected Phases		8		7	4		6		6		2	
Permitted Phases	8		8	4		6		2				
Actuated Green, G (s)	34.0	34.0	34.0	42.0	42.0	38.0	38.0	38.0	38.0	38.0	38.0	
Effective Green, g (s)	35.0	35.0	35.0	43.0	43.0	39.0	39.0	39.0	39.0	39.0	39.0	
Actuated g/C Ratio	0.39	0.39	0.39	0.48	0.48	0.43	0.43	0.43	0.43	0.43	0.43	
Clearance Time (s)	5.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	70	1159	518	136	1419	70	1843		70	1855		
v/s Ratio Prot		0.37		0.05	c0.53		0.48			0.53		
v/s Ratio Perm	0.12		0.12	c0.51		0.52		c0.58				
v/c Ratio	0.31	0.95	0.30	1.18	1.10	1.19	1.12	1.34	1.23			
Uniform Delay, d1	19.1	26.6	19.0	21.7	23.5	25.5	25.5	25.5	25.5			
Progression Factor	0.79	0.87	0.74	1.00	1.00	1.00	1.00	2.03	2.00			
Incremental Delay, d2	7.9	12.6	1.0	135.0	56.5	166.1	61.5	162.9	101.7			
Delay (s)	23.1	35.7	15.2	156.7	80.0	191.6	87.0	214.5	152.9			
Level of Service	C	D	B	F	E	F	F	F	F			
Approach Delay (s)		32.8			87.1		91.1		155.3			
Approach LOS		C			F		F		F			

Intersection Summary

HCM Average Control Delay	100.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	131.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕↕		↕	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.91		1.00	0.91	
Frt		0.99			0.99		1.00	1.00		1.00	0.99	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2942			2941		1490	4276		1490	4238	
Flt Permitted		1.00			1.00		0.19	1.00		0.19	1.00	
Satd. Flow (perm)		2942			2941		302	4276		302	4238	
Volume (vph)	0	724	68	0	1223	117	59	1965	21	197	2137	159
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	731	69	0	1235	118	60	1985	21	199	2159	161
RTOR Reduction (vph)	0	0	0	0	0	0	0	2	0	0	14	0
Lane Group Flow (vph)	0	800	0	0	1353	0	60	2004	0	199	2306	0
Turn Type		Perm		Perm		Perm		Perm		Perm		
Protected Phases		8		4		4		6		6		2
Permitted Phases		8		4		4		6		6		2
Actuated Green, G (s)		30.3			30.3		20.1	20.1		20.1	20.1	
Effective Green, g (s)		31.2			31.2		20.8	20.8		20.8	20.8	
Actuated g/C Ratio		0.52			0.52		0.35	0.35		0.35	0.35	
Clearance Time (s)		4.9			4.9		4.7	4.7		4.7	4.7	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1530			1529		105	1482		105	1469	
v/s Ratio Prot		0.27			c0.46			0.47			0.54	
v/s Ratio Perm							0.20			c0.66		
v/c Ratio		0.52			0.88		0.57	1.35		1.90	1.57	
Uniform Delay, d1		9.5			12.8		16.0	19.6		19.6	19.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3			6.5		20.6	163.0		436.4	259.8	
Delay (s)		9.8			19.3		36.6	182.6		456.0	279.4	
Level of Service		A			B		D	F		F	F	
Approach Delay (s)		9.8			19.3			178.4			293.4	
Approach LOS		A			B			F			F	

Intersection Summary

HCM Average Control Delay	169.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑↑		↗	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	4118		1489	4240		1490	4230		1490	4151	
Flt Permitted	0.14	1.00		0.13	1.00		0.13	1.00		0.95	1.00	
Satd. Flow (perm)	216	4118		206	4240		202	4230		1490	4151	
Volume (vph)	94	1204	179	145	1875	71	140	1802	102	214	1692	227
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	95	1216	181	146	1894	72	141	1820	103	216	1709	229
RTOR Reduction (vph)	0	22	0	0	5	0	0	7	0	0	19	0
Lane Group Flow (vph)	95	1375	0	146	1961	0	141	1916	0	216	1919	0
Conf. Peds. (#/hr)	96		120	120		96	89		58	58		89
Conf. Bikes (#/hr)			8			5			3			4
Turn Type	pm+pt			pm+pt			pm+pt			Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8					
Actuated Green, G (s)	35.0	29.0		38.0	30.5		38.5	31.0		7.5	31.0	
Effective Green, g (s)	34.5	29.0		37.5	30.5		38.0	31.0		7.0	31.0	
Actuated g/C Ratio	0.38	0.32		0.42	0.34		0.42	0.34		0.08	0.34	
Clearance Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	161	1327		186	1437		185	1457		116	1430	
v/s Ratio Prot	0.04	0.33		c0.06	c0.46		0.06	0.45		c0.14	c0.46	
v/s Ratio Perm	0.19			0.27			0.26					
v/c Ratio	0.59	1.04		0.78	1.36		0.76	1.32		1.86	1.34	
Uniform Delay, d1	42.4	30.5		20.3	29.8		42.3	29.5		41.5	29.5	
Progression Factor	1.34	0.67		1.38	0.82		1.77	0.86		1.00	1.00	
Incremental Delay, d2	5.4	34.0		14.1	167.4		10.2	144.8		419.0	158.7	
Delay (s)	62.2	54.6		42.2	191.8		85.1	170.1		460.5	188.2	
Level of Service	E	D		D	F		F	F		F	F	
Approach Delay (s)		55.0			181.5			164.3			215.5	
Approach LOS		E			F			F			F	

Intersection Summary

HCM Average Control Delay	162.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	123.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕↕		↕	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.94			0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1450			1515		1490	4271		1490	4268	
Flt Permitted		0.94			0.90		0.07	1.00		0.07	1.00	
Satd. Flow (perm)		1376			1379		116	4271		116	4268	
Volume (vph)	17	58	58	77	199	43	77	1970	27	9	1996	37
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	18	60	60	79	205	44	79	2031	28	9	2058	38
RTOR Reduction (vph)	0	1	0	0	1	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	137	0	0	327	0	79	2058	0	9	2094	0
Conf. Peds. (#/hr)	6		10	10		6	21		10	10		5
Conf. Bikes (#/hr)			2			2			2			
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		26.9			26.9		53.6	53.6		53.6	53.6	
Effective Green, g (s)		27.9			27.9		54.1	54.1		54.1	54.1	
Actuated g/C Ratio		0.31			0.31		0.60	0.60		0.60	0.60	
Clearance Time (s)		5.0			5.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		427			427		70	2567		70	2566	
v/s Ratio Prot								0.48			0.49	
v/s Ratio Perm		0.10			c0.24		c0.68			0.08		
v/c Ratio		0.32			0.76		1.13	0.80		0.13	0.82	
Uniform Delay, d1		23.8			28.1		17.9	13.8		7.8	14.1	
Progression Factor		1.00			1.00		1.00	1.00		0.48	0.77	
Incremental Delay, d2		0.4			8.0		146.8	2.7		0.3	0.3	
Delay (s)		24.2			36.0		164.8	16.6		4.1	11.1	
Level of Service		C			D		F	B		A	B	
Approach Delay (s)		24.2			36.0			22.0			11.1	
Approach LOS		C			D			C			B	

Intersection Summary

HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↑↑↑		↵	↑↑↑		↵	↑↑↑		↵	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Fr _t	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	4257		1490	4253		1490	4265		1490	4226	
Fl _t Permitted	0.11	1.00		0.10	1.00		0.95	1.00		0.13	1.00	
Satd. Flow (perm)	168	4257		152	4253		1490	4265		202	4226	
Volume (vph)	113	1407	58	95	1735	82	103	1904	53	146	1961	187
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	120	1497	62	101	1846	87	110	2026	56	155	2086	199
RTOR Reduction (vph)	0	4	0	0	5	0	0	3	0	0	11	0
Lane Group Flow (vph)	120	1555	0	101	1928	0	110	2079	0	155	2274	0
Turn Type	Perm		pm+pt			Prot		pm+pt				
Protected Phases	8		7			4		5		1		6
Permitted Phases	8		4					2		6		
Actuated Green, G (s)	35.9	35.9		47.6	47.6		8.0	29.6		37.6	29.6	
Effective Green, g (s)	37.3	37.3		49.0	49.0		8.0	31.0		39.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.49	0.49		0.08	0.31		0.39	0.31	
Clearance Time (s)	5.4	5.4		4.0	5.4		4.0	5.4		4.0	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		4.0	3.0	
Lane Grp Cap (vph)	63	1588		178	2084		119	1322		182	1310	
v/s Ratio Prot		0.37		0.04	c0.45		c0.07			0.07	c0.54	
v/s Ratio Perm	c0.71			0.24				0.49		0.26		
v/c Ratio	1.90	0.98		0.57	0.93		0.92	1.57		0.85	1.74	
Uniform Delay, d ₁	31.4	31.0		19.2	23.8		45.7	34.5		47.2	34.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d ₂	460.3	18.1		4.1	8.5		59.0	261.4		30.7	334.3	
Delay (s)	491.7	49.1		23.3	32.3		104.7	295.9		78.0	368.8	
Level of Service	F	D		C	C		F	F		E	F	
Approach Delay (s)		80.7			31.9			286.3			350.4	
Approach LOS		F			C			F			F	

Intersection Summary

HCM Average Control Delay	201.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	120.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↙	↑↑↑			↑↑↑			↑	↗		↕		
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0		4.0		
Lane Util. Factor	1.00	0.91			0.91			1.00	1.00		1.00		
Frbp, ped/bikes	1.00	1.00			0.99			1.00	0.97		0.98		
Flpb, ped/bikes	0.99	1.00			1.00			1.00	1.00		0.99		
Frt	1.00	1.00			1.00			1.00	0.85		0.94		
Flt Protected	0.95	1.00			1.00			0.99	1.00		0.98		
Satd. Flow (prot)	1477	4246			4206			1555	1287		1407		
Flt Permitted	0.06	1.00			1.00			0.96	1.00		0.87		
Satd. Flow (perm)	97	4246			4206			1496	1287		1239		
Volume (vph)	86	1193	35	0	2084	71	12	76	35	57	30	79	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	89	1230	36	0	2148	73	12	78	36	59	31	81	
RTOR Reduction (vph)	0	2	0	0	3	0	0	0	29	0	2	0	
Lane Group Flow (vph)	89	1264	0	0	2218	0	0	90	7	0	169	0	
Conf. Peds. (#/hr)	151		56	56		151	25		19	19		25	
Conf. Bikes (#/hr)			4			7			1			1	
Turn Type	Perm			Perm			Perm		Perm		Perm		
Protected Phases	6			2			8		8		4		
Permitted Phases	6						8		8		4		
Actuated Green, G (s)	64.8	64.8			64.8			17.7	17.7		17.7		
Effective Green, g (s)	64.3	64.3			64.3			17.7	17.7		17.7		
Actuated g/C Ratio	0.71	0.71			0.71			0.20	0.20		0.20		
Clearance Time (s)	3.5	3.5			3.5			4.0	4.0		4.0		
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)	69	3034			3005			294	253		244		
v/s Ratio Prot		0.30			0.53								
v/s Ratio Perm	c0.92						0.06		0.01		c0.14		
v/c Ratio	1.29	0.42			0.74			0.31	0.03		0.69		
Uniform Delay, d1	12.9	5.2			7.8			30.9	29.2		33.6		
Progression Factor	1.40	0.93			1.00			1.00	1.00		1.00		
Incremental Delay, d2	181.1	0.3			0.2			0.6	0.0		8.2		
Delay (s)	199.0	5.1			7.9			31.5	29.2		41.8		
Level of Service	F	A			A			C	C		D		
Approach Delay (s)		17.9			7.9			30.9			41.8		
Approach LOS		B			A			C			D		
Intersection Summary													
HCM Average Control Delay			13.6									HCM Level of Service	B
HCM Volume to Capacity ratio			1.16										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			88.4%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 21: Wilshire Blvd & Curson Ave

2/23/2010

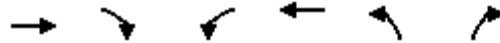
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑	↖		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.86	0.86		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.94			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.99	
Satd. Flow (prot)	1583	4543		1583	4300	1218		1560			1561	
Flt Permitted	0.11	1.00		0.11	1.00	1.00		0.93			0.81	
Satd. Flow (perm)	185	4543		185	4300	1218		1458			1283	
Volume (vph)	44	1213	12	62	1819	130	26	178	167	120	251	252
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	51	1394	14	71	2091	149	30	205	192	138	289	290
RTOR Reduction (vph)	0	1	0	0	0	81	0	4	0	0	0	0
Lane Group Flow (vph)	51	1407	0	71	2091	68	0	423	0	0	717	0
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases	6			2		2	8			4		
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	36.0	36.0		36.0	36.0	36.0		46.0			46.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0	36.0		46.0			46.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40	0.40		0.51			0.51	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	74	1817		74	1720	487		745			656	
v/s Ratio Prot		0.31		c0.49								
v/s Ratio Perm	0.28			0.38		0.06		0.29			c0.56	
v/c Ratio	0.69	0.77		0.96	1.22	0.14		0.57			1.09	
Uniform Delay, d1	22.4	23.5		26.3	27.0	17.2		15.1			22.0	
Progression Factor	1.13	1.16		0.58	0.64	0.56		1.00			1.00	
Incremental Delay, d2	39.4	3.1		76.3	101.0	0.4		1.0			62.9	
Delay (s)	64.8	30.2		91.5	118.4	10.0		16.1			84.9	
Level of Service	E	C		F	F	B		B			F	
Approach Delay (s)		31.4		110.6				16.1			84.9	
Approach LOS		C		F				B			F	

Intersection Summary

HCM Average Control Delay	75.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	124.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	1.00		1.00	1.00	0.90	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	4537		1583	4550	1483	
Flt Permitted	1.00		0.18	1.00	0.99	
Satd. Flow (perm)	4537		293	4550	1483	
Volume (vph)	1187	23	106	2196	10	28
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1249	24	112	2312	11	29
RTOR Reduction (vph)	2	0	0	0	20	0
Lane Group Flow (vph)	1271	0	112	2312	20	0
Turn Type			Perm			
Protected Phases	6			2	8	
Permitted Phases			2			
Actuated Green, G (s)	54.8		54.8	54.8	26.0	
Effective Green, g (s)	55.3		55.3	55.3	26.7	
Actuated g/C Ratio	0.61		0.61	0.61	0.30	
Clearance Time (s)	4.5		4.5	4.5	4.7	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2788		180	2796	440	
v/s Ratio Prot	0.28			c0.51	c0.01	
v/s Ratio Perm			0.38			
v/c Ratio	0.46		0.62	0.83	0.04	
Uniform Delay, d1	9.3		10.8	13.6	22.6	
Progression Factor	1.00		1.47	1.52	1.00	
Incremental Delay, d2	0.5		1.5	0.3	0.0	
Delay (s)	9.8		17.4	21.0	22.6	
Level of Service	A		B	C	C	
Approach Delay (s)	9.8			20.8	22.6	
Approach LOS	A			C	C	

Intersection Summary

HCM Average Control Delay	17.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗	↘	↘	↗↗	↘	↘	↗↗	↘
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	0.98
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	3167	1417	1583	3167	1417	1583	3167	1417	1583	3111	3111
Flt Permitted	0.12	1.00	1.00	0.12	1.00	1.00	0.14	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	208	3167	1417	195	3167	1417	238	3167	1417	208	3111	3111
Volume (vph)	75	924	109	226	1532	147	86	947	112	112	1381	183
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	77	943	111	231	1563	150	88	966	114	114	1409	187
RTOR Reduction (vph)	0	0	22	0	0	7	0	0	79	0	8	0
Lane Group Flow (vph)	77	943	89	231	1563	143	88	966	35	114	1588	0
Turn Type	Perm		Perm	pm+pt		pm+ov	Perm		Perm	pm+pt		
Protected Phases		6		5		2	7		8		7	4
Permitted Phases	6		6	2		2	8		8		4	
Actuated Green, G (s)	31.0	31.0	31.0	43.0	43.0	48.7	28.1	28.1	28.1	37.0	37.0	37.0
Effective Green, g (s)	32.0	32.0	32.0	44.0	44.0	50.0	28.0	28.0	28.0	38.0	38.0	38.0
Actuated g/C Ratio	0.36	0.36	0.36	0.49	0.49	0.56	0.31	0.31	0.31	0.42	0.42	0.42
Clearance Time (s)	5.0	5.0	5.0	3.2	5.0	4.3	3.9	3.9	3.9	4.3	5.0	5.0
Vehicle Extension (s)	4.7	4.7	4.7	3.0	4.2	3.0	4.3	4.3	4.3	3.0	4.5	4.5
Lane Grp Cap (vph)	74	1126	504	219	1548	850	74	985	441	179	1314	1314
v/s Ratio Prot		0.30		0.09	c0.49	0.01		0.31		0.04	c0.51	
v/s Ratio Perm	0.37		0.06	c0.42		0.09	0.37		0.03	0.23		
v/c Ratio	1.04	0.84	0.18	1.05	1.01	0.17	1.19	0.98	0.08	0.64	1.21	1.21
Uniform Delay, d1	29.0	26.6	19.9	20.7	23.0	9.8	31.0	30.7	21.9	20.0	26.0	26.0
Progression Factor	1.00	1.00	1.00	2.12	0.30	0.36	0.49	0.48	0.13	0.68	0.45	0.45
Incremental Delay, d2	116.2	7.5	0.8	34.8	9.4	0.0	97.2	5.2	0.0	1.7	95.6	95.6
Delay (s)	145.2	34.1	20.7	78.5	16.4	3.5	112.3	19.8	2.9	15.3	107.2	107.2
Level of Service	F	C	C	E	B	A	F	B	A	B	F	F
Approach Delay (s)		40.3			22.8			25.2			101.0	
Approach LOS		D			C			C			F	

Intersection Summary

HCM Average Control Delay	49.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	126.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3144		1583	3167	1417	1583	3119		1583	3135	
Flt Permitted	0.11	1.00		0.23	1.00	1.00	0.14	1.00		0.12	1.00	
Satd. Flow (perm)	190	3144		384	3167	1417	230	3119		202	3135	
Volume (vph)	104	670	34	148	1592	170	79	1047	116	190	1417	100
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	116	744	38	164	1769	189	88	1163	129	211	1574	111
RTOR Reduction (vph)	0	4	0	0	0	28	0	9	0	0	6	0
Lane Group Flow (vph)	116	778	0	164	1769	161	88	1283	0	211	1679	0
Turn Type	pm+pt			pm+pt		pm+ov	Perm			pm+pt		
Protected Phases	1	6		5	2	7		8		7	4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	38.9	33.1		38.9	33.1	38.9	27.1	27.1		36.1	36.1	
Effective Green, g (s)	40.0	35.0		40.0	35.0	40.0	29.0	29.0		38.0	38.0	
Actuated g/C Ratio	0.44	0.39		0.44	0.39	0.44	0.32	0.32		0.42	0.42	
Clearance Time (s)	3.2	5.9		3.2	5.9	3.2	5.9	5.9		3.2	5.9	
Vehicle Extension (s)	3.0	4.6		3.0	4.7	3.0	4.7	4.7		3.0	4.7	
Lane Grp Cap (vph)	162	1223		237	1232	693	74	1005		162	1324	
v/s Ratio Prot	c0.04	0.25		0.04	c0.56	0.01		0.41		0.07	c0.54	
v/s Ratio Perm	0.28			0.27		0.10	0.38			c0.48		
v/c Ratio	0.72	0.64		0.69	1.44	0.23	1.19	1.28		1.30	1.27	
Uniform Delay, d1	43.3	22.3		18.0	27.5	15.5	30.5	30.5		44.7	26.0	
Progression Factor	1.00	1.00		0.62	0.81	0.73	1.45	1.45		0.93	0.55	
Incremental Delay, d2	14.0	2.5		4.4	198.6	0.1	161.9	131.7		140.3	121.3	
Delay (s)	57.3	24.9		15.6	221.0	11.3	206.1	176.0		181.8	135.7	
Level of Service	E	C		B	F	B	F	F		F	F	
Approach Delay (s)		29.0			186.4			178.0			140.8	
Approach LOS		C			F			F			F	

Intersection Summary

HCM Average Control Delay	148.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	124.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖↗	↖	↗	↖	↖↗	↗	↖	↖↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.94	1.00	1.00	0.91	1.00	0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.98	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1550	1637		3072	1667	1337	1583	3167	1287	1553	3094	
Flt Permitted	0.43	1.00		0.95	1.00	1.00	0.09	1.00	1.00	0.25	1.00	
Satd. Flow (perm)	705	1637		3072	1667	1337	142	3167	1287	413	3094	
Volume (vph)	20	255	29	363	467	101	10	833	95	60	1352	112
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	21	266	30	378	486	105	10	868	99	62	1408	117
RTOR Reduction (vph)	0	5	0	0	0	61	0	0	0	0	7	0
Lane Group Flow (vph)	21	291	0	378	486	44	10	868	99	62	1518	0
Conf. Peds. (#/hr)	28		6	6		28	43		36	36		43
Conf. Bikes (#/hr)			4			1			5			7
Turn Type	Perm			Prot		Perm	Perm	pm+ov		Perm		
Protected Phases		8		7	4			6	7		2	
Permitted Phases	8					4	6		6		2	
Actuated Green, G (s)	20.2	20.2		10.0	34.2	34.2	46.2	46.2	56.2	46.2	46.2	
Effective Green, g (s)	21.0	21.0		10.0	35.0	35.0	47.0	47.0	57.0	47.0	47.0	
Actuated g/C Ratio	0.23	0.23		0.11	0.39	0.39	0.52	0.52	0.63	0.52	0.52	
Clearance Time (s)	4.8	4.8		4.0	4.8	4.8	4.8	4.8	4.0	4.8	4.8	
Vehicle Extension (s)	5.9	5.9		3.0	5.2	5.2	4.8	4.8	3.0	4.4	4.4	
Lane Grp Cap (vph)	165	382		341	648	520	74	1654	872	216	1616	
v/s Ratio Prot		0.18		c0.12	c0.29			0.27	0.01		c0.49	
v/s Ratio Perm	0.03					0.03	0.07		0.06	0.15		
v/c Ratio	0.13	0.76		1.11	0.75	0.08	0.14	0.52	0.11	0.29	0.94	
Uniform Delay, d1	27.3	32.2		40.0	23.7	17.4	11.1	14.2	6.5	12.1	20.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.28	0.25	0.22	0.21	0.41	
Incremental Delay, d2	1.6	13.5		81.2	7.8	0.3	0.3	0.1	0.0	0.3	1.5	
Delay (s)	28.8	45.6		121.2	31.5	17.7	3.5	3.7	1.4	2.9	9.8	
Level of Service	C	D		F	C	B	A	A	A	A	A	
Approach Delay (s)		44.5			65.0			3.5			9.5	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.98		1.00	1.00	0.83
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4543		1578	4500		1583	3062		1583	3167	1180
Flt Permitted	0.14	1.00		0.16	1.00		0.13	1.00		0.95	1.00	1.00
Satd. Flow (perm)	227	4543		259	4500		222	3062		1583	3167	1180
Volume (vph)	138	986	5	101	1917	46	217	1146	82	166	1611	272
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	147	1049	5	107	2039	49	231	1219	87	177	1714	289
RTOR Reduction (vph)	0	1	0	0	3	0	0	6	0	0	0	121
Lane Group Flow (vph)	147	1053	0	107	2085	0	231	1300	0	177	1714	168
Conf. Peds. (#/hr)	227		147	147		227	144		183	183		144
Conf. Bikes (#/hr)			2			6			8			6
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8					4
Actuated Green, G (s)	35.2	28.4		32.4	27.0		35.8	29.0		10.8	33.0	33.0
Effective Green, g (s)	35.4	29.4		32.6	28.0		36.0	30.0		10.0	34.0	34.0
Actuated g/C Ratio	0.39	0.33		0.36	0.31		0.40	0.33		0.11	0.38	0.38
Clearance Time (s)	3.2	5.0		3.2	5.0		3.2	5.0		3.2	5.0	5.0
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	180	1484		161	1400		180	1021		176	1196	446
v/s Ratio Prot	c0.05	0.23		0.03	c0.46		c0.09	0.42		0.11	c0.54	
v/s Ratio Perm	0.27			0.21			0.43					0.14
v/c Ratio	0.82	0.71		0.66	1.49		1.28	1.27		1.01	1.43	0.38
Uniform Delay, d1	43.2	26.6		20.6	31.0		44.2	30.0		40.0	28.0	20.3
Progression Factor	1.18	1.16		1.00	1.00		1.53	0.87		0.81	1.30	2.00
Incremental Delay, d2	18.5	2.1		9.9	224.1		156.2	129.0		52.1	197.6	1.3
Delay (s)	69.5	32.9		30.5	255.1		223.9	155.2		84.6	234.0	41.9
Level of Service	E	C		C	F		F	F		F	F	D
Approach Delay (s)		37.4			244.2			165.5			196.4	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	177.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	127.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗	↖	↔	↗		↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)			4.0	4.0	4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor			1.00	0.95	0.91	0.95		0.95		1.00	0.95	
Frbp, ped/bikes			0.98	1.00	0.99	0.97		0.99		1.00	1.00	
Flpb, ped/bikes			1.00	1.00	1.00	1.00		1.00		1.00	1.00	
Frt			0.86	1.00	0.94	0.85		0.98		1.00	1.00	
Flt Protected			1.00	0.95	0.97	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1412	1502	1361	1303		3074		1583	3167	
Flt Permitted			1.00	0.95	0.97	1.00		1.00		0.12	1.00	
Satd. Flow (perm)			1412	1502	1361	1303		3074		197	3167	
Volume (vph)	0	0	23	198	0	215	0	1169	176	123	1240	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	24	208	0	226	0	1231	185	129	1305	0
RTOR Reduction (vph)	0	0	23	0	30	128	0	11	0	0	0	0
Lane Group Flow (vph)	0	0	1	124	116	36	0	1405	0	129	1305	0
Conf. Peds. (#/hr)	11		1	1		11	8		23	23		8
Conf. Bikes (#/hr)						5			5			1
Turn Type			custom	Perm		Perm				Perm		
Protected Phases					3			2			2	
Permitted Phases			4	3		3				2		
Actuated Green, G (s)			2.2	18.9	18.9	18.9		54.5		54.5	54.5	
Effective Green, g (s)			3.1	19.8	19.8	19.8		55.1		55.1	55.1	
Actuated g/C Ratio			0.03	0.22	0.22	0.22		0.61		0.61	0.61	
Clearance Time (s)			4.9	4.9	4.9	4.9		4.6		4.6	4.6	
Vehicle Extension (s)			3.0	3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)			49	330	299	287		1882		121	1939	
v/s Ratio Prot								0.46			0.41	
v/s Ratio Perm			c0.00	0.08	0.08	0.03				c0.66		
v/c Ratio			0.02	0.38	0.39	0.13		0.75		1.07	0.67	
Uniform Delay, d1			42.0	29.8	29.9	28.2		12.5		17.4	11.5	
Progression Factor			1.00	1.00	1.00	1.00		1.00		1.56	0.95	
Incremental Delay, d2			0.1	0.7	0.8	0.2		2.7		44.3	0.2	
Delay (s)			42.1	30.6	30.8	28.4		15.2		71.5	11.1	
Level of Service			D	C	C	C		B		E	B	
Approach Delay (s)		42.1			29.8			15.2			16.6	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM Average Control Delay			17.9									HCM Level of Service B
HCM Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			90.0									Sum of lost time (s) 12.0
Intersection Capacity Utilization			76.5%									ICU Level of Service D
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑		↔	↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	
Lane Util. Factor		0.91			0.91		1.00	0.86			0.86	
Frt		0.99			0.96		1.00	1.00			1.00	
Flt Protected		1.00			1.00		0.95	1.00			1.00	
Satd. Flow (prot)		4493			4367		1583	5733			5733	
Flt Permitted		1.00			1.00		0.17	1.00			1.00	
Satd. Flow (perm)		4493			4367		284	5733			5733	
Volume (vph)	0	1433	132	0	1819	667	169	1448	0	0	1460	0
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	1447	133	0	1837	674	171	1463	0	0	1475	0
RTOR Reduction (vph)	0	11	0	0	66	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1569	0	0	2445	0	171	1463	0	0	1475	0
Turn Type							Perm					
Protected Phases		6			6			2			2	
Permitted Phases							2					
Actuated Green, G (s)		22.1			22.1		24.5	24.5			24.5	
Effective Green, g (s)		23.0			23.0		23.5	23.5			23.5	
Actuated g/C Ratio		0.23			0.23		0.24	0.24			0.24	
Clearance Time (s)		4.9			4.9		3.0	3.0			3.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		1033			1004		67	1347			1347	
v/s Ratio Prot		0.35			c0.56			0.26			0.26	
v/s Ratio Perm							c0.60					
v/c Ratio		1.52			2.44		2.55	1.09			1.10	
Uniform Delay, d1		38.5			38.5		38.2	38.2			38.2	
Progression Factor		0.69			1.00		1.00	1.00			0.64	
Incremental Delay, d2		234.0			648.8		740.2	51.4			44.1	
Delay (s)		260.8			687.3		778.4	89.7			68.6	
Level of Service		F			F		F	F			E	
Approach Delay (s)		260.8			687.3			161.8			68.6	
Approach LOS		F			F			F			E	

Intersection Summary

HCM Average Control Delay	347.7	HCM Level of Service	F
HCM Volume to Capacity ratio	2.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	53.5
Intersection Capacity Utilization	100.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗		↑↑↑	↗		↑↗		↘	↑↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.86	1.00		0.91	1.00		0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85		1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1583	5733	1417		4550	1417		3166		1583	3137	
Flt Permitted	0.17	1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)	284	5733	1417		4550	1417		3166		1583	3137	
Volume (vph)	81	1191	40	0	1806	343	0	909	2	224	1231	81
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	84	1228	41	0	1862	354	0	937	2	231	1269	84
RTOR Reduction (vph)	0	0	31	0	0	206	0	0	0	0	5	0
Lane Group Flow (vph)	84	1228	10	0	1862	148	0	939	0	231	1348	0
Turn Type	Perm		Perm		Perm				Prot			
Protected Phases	2		2		2		8		7		4	
Permitted Phases	2		2		2							
Actuated Green, G (s)	24.5	24.5	24.5		24.5	24.5		31.0		5.0	31.0	
Effective Green, g (s)	23.5	23.5	23.5		23.5	23.5		32.5		5.0	32.5	
Actuated g/C Ratio	0.24	0.24	0.24		0.24	0.24		0.32		0.05	0.32	
Clearance Time (s)	3.0	3.0	3.0		3.0	3.0		5.5		4.0	5.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		5.0		3.0	4.0	
Lane Grp Cap (vph)	67	1347	333		1069	333		1029		79	1020	
v/s Ratio Prot		0.21			c0.41			0.30		c0.15	c0.43	
v/s Ratio Perm	0.30		0.01			0.10						
v/c Ratio	1.25	0.91	0.03		1.74	0.45		0.91		2.92	1.32	
Uniform Delay, d1	38.2	37.2	29.5		38.2	32.7		32.4		47.5	33.8	
Progression Factor	1.00	1.00	1.00		0.97	1.29		0.20		1.00	1.00	
Incremental Delay, d2	192.8	10.8	0.2		334.2	0.4		7.2		899.2	151.7	
Delay (s)	231.0	48.1	29.6		371.1	42.5		13.6		946.7	185.5	
Level of Service	F	D	C		F	D		B		F	F	
Approach Delay (s)		58.9			318.6			13.6			296.5	
Approach LOS		E			F			B			F	

Intersection Summary

HCM Average Control Delay	208.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	39.0
Intersection Capacity Utilization	102.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑			↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95			0.95	
Frt	1.00	1.00		1.00	1.00		1.00	1.00			0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1583	4541		1583	4549		1583	3162			3028	
Flt Permitted	0.17	1.00		0.17	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	290	4541		290	4549		1583	3162			3028	
Volume (vph)	29	1541	22	44	1769	2	55	884	8	0	866	356
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	30	1572	22	45	1805	2	56	902	8	0	884	363
RTOR Reduction (vph)	0	2	0	0	0	0	0	1	0	0	45	0
Lane Group Flow (vph)	30	1592	0	45	1807	0	56	909	0	0	1202	0
Turn Type	Perm		Perm		Prot							
Protected Phases	6		6		3		8				4	
Permitted Phases	6		6									
Actuated Green, G (s)	22.1	22.1		22.1	22.1		5.0	31.0			31.0	
Effective Green, g (s)	23.0	23.0		23.0	23.0		5.0	32.5			32.5	
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.05	0.32			0.32	
Clearance Time (s)	4.9	4.9		4.9	4.9		4.0	5.5			5.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	5.0			4.0	
Lane Grp Cap (vph)	67	1044		67	1046		79	1028			984	
v/s Ratio Prot		0.35			c0.40		c0.04	0.29			c0.40	
v/s Ratio Perm	0.10			0.16								
v/c Ratio	0.45	1.53		0.67	1.73		0.71	0.88			1.22	
Uniform Delay, d1	33.0	38.5		35.1	38.5		46.8	32.0			33.8	
Progression Factor	1.00	1.00		0.71	0.69		1.00	1.00			0.29	
Incremental Delay, d2	20.1	241.3		4.8	327.8		25.1	11.1			100.8	
Delay (s)	53.2	279.8		29.6	354.5		71.9	43.0			110.7	
Level of Service	D	F		C	F		E	D			F	
Approach Delay (s)		275.6			346.6			44.7			110.7	
Approach LOS		F			F			D			F	

Intersection Summary

HCM Average Control Delay	223.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	39.5
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕		↗	↕	↖	↗	↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Fr _t	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	3123		1583	3150		1583	3167	1417	1583	3167	1417
Fl _t Permitted	0.13	1.00		0.13	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	222	3123		222	3150		1583	3167	1417	1583	3167	1417
Volume (vph)	70	927	93	125	1520	54	148	933	137	43	839	173
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	72	956	96	129	1567	56	153	962	141	44	865	178
RTOR Reduction (vph)	0	9	0	0	3	0	0	0	74	0	0	27
Lane Group Flow (vph)	72	1043	0	129	1620	0	153	962	67	44	865	151
Turn Type	Perm			Perm			Prot			Perm	Prot	
Protected Phases	6			2			3		8		7	4
Permitted Phases	6			2					8			4
Actuated Green, G (s)	29.0	29.0		29.0	29.0		10.0	41.6	41.6	5.4	37.0	37.0
Effective Green, g (s)	30.0	30.0		30.0	30.0		10.0	42.6	42.6	5.4	38.0	38.0
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.11	0.47	0.47	0.06	0.42	0.42
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	74	1041		74	1050		176	1499	671	95	1337	598
v/s Ratio Prot		0.33			0.51		c0.10	c0.30		0.03	0.27	
v/s Ratio Perm	0.32			c0.58					0.05			0.11
v/c Ratio	0.97	1.00		1.74	1.54		0.87	0.64	0.10	0.46	0.65	0.25
Uniform Delay, d ₁	29.6	30.0		30.0	30.0		39.4	17.9	13.1	40.9	20.7	16.8
Progression Factor	0.53	0.54		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d ₂	25.5	8.9		384.1	249.2		33.6	2.1	0.3	3.5	2.4	1.0
Delay (s)	41.2	25.1		414.1	279.2		73.0	20.1	13.4	44.4	23.1	17.8
Level of Service	D	C		F	F		E	C	B	D	C	B
Approach Delay (s)		26.1			289.1			25.7			23.1	
Approach LOS		C			F			C			C	

Intersection Summary

HCM Average Control Delay	113.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	105.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↑↑			↖	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95			0.95	
Frt	1.00	0.99		1.00	1.00			0.96			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1583	4504		1583	4543			3050			3085	
Flt Permitted	0.09	1.00		0.14	1.00			1.00			0.67	
Satd. Flow (perm)	152	4504		240	4543			3050			2079	
Volume (vph)	64	1125	81	270	2030	20	0	536	175	120	1012	187
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	69	1210	87	290	2183	22	0	576	188	129	1088	201
RTOR Reduction (vph)	0	9	0	0	1	0	0	23	0	0	1	0
Lane Group Flow (vph)	69	1288	0	290	2204	0	0	741	0	0	1417	0
Turn Type	Perm		Perm				Perm					
Protected Phases	6		2				8					
Permitted Phases	6		2				4					
Actuated Green, G (s)	42.3	42.3		42.3	42.3			36.0			36.0	
Effective Green, g (s)	44.0	44.0		44.0	44.0			38.0			38.0	
Actuated g/C Ratio	0.49	0.49		0.49	0.49			0.42			0.42	
Clearance Time (s)	5.7	5.7		5.7	5.7			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	74	2202		117	2221			1288			878	
v/s Ratio Prot		0.29			0.49			0.24				
v/s Ratio Perm	0.46			c1.21							c0.68	
v/c Ratio	0.93	0.58		2.48	0.99			0.58			1.61	
Uniform Delay, d1	21.6	16.5		23.0	22.8			19.8			26.0	
Progression Factor	0.43	0.48		0.62	0.53			1.00			1.00	
Incremental Delay, d2	44.5	0.4		667.7	4.2			0.6			281.5	
Delay (s)	53.9	8.3		682.0	16.3			20.5			307.5	
Level of Service	D	A		F	B			C			F	
Approach Delay (s)		10.6			93.7			20.5			307.5	
Approach LOS		B			F			C			F	

Intersection Summary

HCM Average Control Delay	115.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.07		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	130.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑↑		↖	↑↑↑	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.99		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4492		1583	4479		1583	4482		1583	4550	1417
Flt Permitted	0.13	1.00		0.13	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	215	4492		215	4479		1583	4482		1583	4550	1417
Volume (vph)	53	1191	110	105	1671	195	483	1284	142	285	1103	186
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	57	1281	118	113	1797	210	519	1381	153	306	1186	200
RTOR Reduction (vph)	0	12	0	0	16	0	0	15	0	0	0	4
Lane Group Flow (vph)	57	1387	0	113	1991	0	519	1519	0	306	1186	196
Turn Type	Perm			Perm			Prot			Prot		Perm
Protected Phases	4			8			5			1		6
Permitted Phases	4			8			2					6
Actuated Green, G (s)	29.0	29.0		29.0	29.0		14.0	31.0		15.0	31.0	31.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		15.0	32.0		15.0	32.0	32.0
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.17	0.36		0.17	0.36	0.36
Clearance Time (s)	6.0	6.0		6.0	6.0		5.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	4.0	4.0		4.0	4.0		2.0	4.0		2.0	4.0	4.0
Lane Grp Cap (vph)	74	1547		74	1543		264	1594		264	1618	504
v/s Ratio Prot		0.31			0.44		c0.33			0.19	0.26	
v/s Ratio Perm	0.27			c0.53			c0.34					0.14
v/c Ratio	0.77	0.90		1.53	1.29		1.97	0.95		1.16	0.73	0.39
Uniform Delay, d1	26.3	28.0		29.5	29.5		37.5	28.3		37.5	25.3	21.7
Progression Factor	1.00	1.00		0.43	0.41		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	53.7	8.5		243.3	131.2		448.1	13.8		105.3	3.0	2.3
Delay (s)	80.0	36.5		256.2	143.3		485.6	42.1		142.8	28.3	23.9
Level of Service	F	D		F	F		F	D		F	C	C
Approach Delay (s)		38.2			149.3			154.2			48.5	
Approach LOS		D			F			F			D	

Intersection Summary

HCM Average Control Delay	105.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	116.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



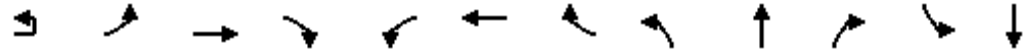
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	0.96
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	1.00
Satd. Flow (prot)	1583	4530		1565	4521			1588			1657	1364
Flt Permitted	0.06	1.00		0.16	1.00			0.87			0.97	1.00
Satd. Flow (perm)	98	4530		262	4521			1392			1612	1364
Volume (vph)	84	1231	21	26	1958	47	34	155	48	17	200	101
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	1368	23	29	2176	52	38	172	53	19	222	112
RTOR Reduction (vph)	0	2	0	0	3	0	0	9	0	0	0	8
Lane Group Flow (vph)	93	1389	0	29	2225	0	0	254	0	0	241	104
Confl. Peds. (#/hr)	47		44	44		47	18		31	31		18
Confl. Bikes (#/hr)			3			2			4			1
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	69.0	69.0		69.0	69.0			25.0			25.0	25.0
Effective Green, g (s)	68.0	68.0		68.0	68.0			24.0			24.0	24.0
Actuated g/C Ratio	0.68	0.68		0.68	0.68			0.24			0.24	0.24
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0			3.0			3.0	3.0
Lane Grp Cap (vph)	67	3080		178	3074			334			387	327
v/s Ratio Prot		0.31			0.49							
v/s Ratio Perm	c0.95			0.11				c0.18			0.15	0.08
v/c Ratio	1.39	0.45		0.16	0.72			0.76			0.62	0.32
Uniform Delay, d1	16.0	7.4		5.8	10.1			35.3			34.0	31.3
Progression Factor	0.79	0.37		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	207.5	0.2		2.0	1.5			15.0			7.4	2.5
Delay (s)	220.2	3.0		7.7	11.6			50.3			41.3	33.8
Level of Service	F	A		A	B			D			D	C
Approach Delay (s)		16.6			11.6			50.3			38.9	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘↗	↑↑↗		↘↗	↑↑↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.91		0.97	0.91	
Frbp, ped/bikes	1.00	1.00	0.90	1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3167	1276	1569	3110		3072	4455		3072	4440	
Flt Permitted	0.11	1.00	1.00	0.31	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	186	3167	1276	516	3110		3072	4455		3072	4440	
Volume (vph)	197	482	43	299	1311	93	176	1343	86	31	2163	234
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	214	524	47	325	1425	101	191	1460	93	34	2351	254
RTOR Reduction (vph)	0	0	33	0	4	0	0	5	0	0	11	0
Lane Group Flow (vph)	214	524	14	325	1522	0	191	1548	0	34	2594	0
Conf. Peds. (#/hr)	72		58	58		72	51		51	51		51
Conf. Bikes (#/hr)			3			3			6			3
Turn Type	pm+pt		Perm	pm+pt		Prot			Prot			
Protected Phases	1	6		5	2	3	8		7	4		
Permitted Phases	6		6	2								
Actuated Green, G (s)	49.2	34.4	34.4	49.6	34.6	13.6	48.8		4.4	39.6		
Effective Green, g (s)	49.6	35.8	35.8	50.0	36.0	13.6	49.8		4.4	40.6		
Actuated g/C Ratio	0.41	0.30	0.30	0.42	0.30	0.11	0.41		0.04	0.34		
Clearance Time (s)	3.0	5.4	5.4	3.0	5.4	4.0	5.0		4.0	5.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	238	945	381	338	933	348	1849		113	1502		
v/s Ratio Prot	0.10	0.17		c0.11	c0.49	0.06	c0.35		0.01	c0.58		
v/s Ratio Perm	0.27		0.01	0.29								
v/c Ratio	0.90	0.55	0.04	0.96	1.63	0.55	0.84		0.30	1.73		
Uniform Delay, d1	32.4	35.4	29.9	30.0	42.0	50.3	31.5		56.3	39.7		
Progression Factor	1.60	0.74	0.66	1.00	1.00	0.76	0.64		1.26	0.39		
Incremental Delay, d2	28.0	0.6	0.0	38.6	288.9	1.5	4.1		0.1	327.3		
Delay (s)	79.9	26.9	19.9	68.6	330.9	39.9	24.1		71.0	343.0		
Level of Service	E	C	B	E	F	D	C		E	F		
Approach Delay (s)		40.9			284.8		25.9			339.5		
Approach LOS		D			F		C			F		

Intersection Summary			
HCM Average Control Delay	213.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	128.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↑↑		↔	↑↑↑	↔	↔		↔	↔	↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00		0.91		1.00	0.86	0.86	1.00		1.00	0.97	
Frt	1.00		0.99		1.00	1.00	0.85	1.00		0.85	1.00	
Flt Protected	0.95		1.00		0.95	1.00	1.00	0.95		1.00	0.95	
Satd. Flow (prot)	1583		4522		1583	4300	1218	1583		1417	3072	
Flt Permitted	0.95		1.00		0.95	1.00	1.00	0.95		1.00	0.95	
Satd. Flow (perm)	1583		4522		1583	4300	1218	1583		1417	3072	
Volume (vph)	2	0	588	25	6	1553	818	13	0	13	796	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	2	0	632	27	6	1670	880	14	0	14	856	0
RTOR Reduction (vph)	0	0	2	0	0	0	311	0	0	13	0	0
Lane Group Flow (vph)	2	0	657	0	6	1670	569	14	0	1	856	0
Turn Type	Prot				Prot		Perm	Prot			custom	custom
Protected Phases	5		2		1		6			7		
Permitted Phases							6				7	8
Actuated Green, G (s)	2.2		69.2		1.4		67.5			67.5	4.4	23.2
Effective Green, g (s)	4.1		70.2		3.3		69.4			69.4	5.4	25.1
Actuated g/C Ratio	0.03		0.59		0.03		0.58			0.58	0.05	0.21
Clearance Time (s)	5.9		5.0		5.9		5.9			5.9	5.0	5.9
Vehicle Extension (s)	3.0		3.0		3.0		3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	54		2645		44		2487			704	71	64
v/s Ratio Prot	0.00		c0.15		0.00		0.39			c0.01		
v/s Ratio Perm							c0.47				0.00	c0.28
v/c Ratio	0.04		0.25		0.14		0.67			0.81	0.20	0.01
Uniform Delay, d1	56.0		12.1		57.0		17.4			20.0	55.2	54.7
Progression Factor	1.03		1.24		1.07		0.81			4.45	1.00	1.04
Incremental Delay, d2	0.2		0.2		0.3		0.3			2.5	1.4	0.1
Delay (s)	58.0		15.2		61.1		14.4			91.6	56.6	54.8
Level of Service	E		B		E		B			F	E	D
Approach Delay (s)			15.3				41.1			55.7		189.6
Approach LOS			B				D			E		F
Intersection Summary												
HCM Average Control Delay			74.2				HCM Level of Service				E	
HCM Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			72.4%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	SBR
Lane Configurations	8
Ideal Flow (vphpl)	1700
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1417
Flt Permitted	1.00
Satd. Flow (perm)	1417
Volume (vph)	205
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	220
RTOR Reduction (vph)	164
Lane Group Flow (vph)	56
Turn Type	custom
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	23.2
Effective Green, g (s)	25.1
Actuated g/C Ratio	0.21
Clearance Time (s)	5.9
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	296
v/s Ratio Prot	
v/s Ratio Perm	0.04
v/c Ratio	0.19
Uniform Delay, d1	39.1
Progression Factor	3.45
Incremental Delay, d2	0.6
Delay (s)	135.4
Level of Service	F
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑	↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor		0.86	1.00		0.86	1.00	1.00	0.91			0.91	
Frt		1.00	0.85		1.00	0.85	1.00	1.00			0.97	
Flt Protected		1.00	1.00		1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)		5733	1417		5733	1417	1583	4548			4398	
Flt Permitted		1.00	1.00		1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)		5733	1417		5733	1417	1583	4548			4398	
Volume (vph)	0	1070	302	0	1492	308	314	1356	4	0	1904	547
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1092	308	0	1522	314	320	1384	4	0	1943	558
RTOR Reduction (vph)	0	0	2	0	0	31	0	0	0	0	2	0
Lane Group Flow (vph)	0	1092	306	0	1522	283	320	1388	0	0	2499	0
Turn Type		pm+ov			Perm		Prot					
Protected Phases		8	1		4		1	6			2	
Permitted Phases		8	8			4						
Actuated Green, G (s)		39.0	49.0		39.0	39.0	10.0	69.0			53.5	
Effective Green, g (s)		41.0	52.5		41.0	41.0	11.5	71.0			55.5	
Actuated g/C Ratio		0.34	0.44		0.34	0.34	0.10	0.59			0.46	
Clearance Time (s)		6.0	5.5		6.0	6.0	5.5	6.0			6.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)		1959	667		1959	484	152	2691			2034	
v/s Ratio Prot		0.19	0.04		c0.27		c0.20	0.31			c0.57	
v/s Ratio Perm			0.17			0.20						
v/c Ratio		0.56	0.46		0.78	0.58	2.11	0.52			1.23	
Uniform Delay, d1		32.1	23.8		35.4	32.5	54.2	14.4			32.2	
Progression Factor		1.38	1.90		1.00	1.00	1.23	0.76			0.35	
Incremental Delay, d2		0.6	0.2		3.1	5.1	515.9	0.6			103.3	
Delay (s)		44.9	45.3		38.5	37.6	582.8	11.6			114.4	
Level of Service		D	D		D	D	F	B			F	
Approach Delay (s)		45.0			38.4			118.6			114.4	
Approach LOS		D			D			F			F	

Intersection Summary

HCM Average Control Delay	83.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↗↗↗		↗	↗↗↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.95			0.99		1.00	1.00		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1563			1628		1583	4533		1583	4480	
Flt Permitted		0.84			0.86		0.06	1.00		0.11	1.00	
Satd. Flow (perm)		1337			1415		98	4533		179	4480	
Volume (vph)	50	59	61	48	112	12	75	1567	41	72	1813	206
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	62	64	51	118	13	79	1649	43	76	1908	217
RTOR Reduction (vph)	0	17	0	0	2	0	0	2	0	0	12	0
Lane Group Flow (vph)	0	162	0	0	180	0	79	1690	0	76	2113	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		8		8		2		6		6	
Permitted Phases	4		8		8		2		6		6	
Actuated Green, G (s)	30.0		30.0		30.0		83.4		83.4		83.4	
Effective Green, g (s)	29.0		29.0		29.0		83.0		83.0		83.0	
Actuated g/C Ratio	0.24		0.24		0.24		0.69		0.69		0.69	
Clearance Time (s)	3.0		3.0		3.0		3.6		3.6		3.6	
Vehicle Extension (s)	3.0		3.0		3.0		5.0		5.0		5.0	
Lane Grp Cap (vph)	323		342		342		68		3135		124	
v/s Ratio Prot							0.37				0.47	
v/s Ratio Perm	0.12		c0.13		c0.13		c0.81		c0.81		0.42	
v/c Ratio	0.50		0.53		0.53		1.16		0.54		0.61	
Uniform Delay, d1	39.3		39.5		39.5		18.5		9.1		9.9	
Progression Factor	1.00		1.00		1.00		1.00		1.00		0.78	
Incremental Delay, d2	5.5		5.7		5.7		159.5		0.7		2.0	
Delay (s)	44.8		45.2		45.2		178.0		9.8		9.7	
Level of Service	D		D		D		F		A		A	
Approach Delay (s)	44.8		45.2		45.2		17.3		17.3		4.5	
Approach LOS	D		D		D		B		B		A	

Intersection Summary

HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 39: Wilshire Blvd & La Cienega Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶		↶	↶↶↶		↶	↶↶↶	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.97		1.00	1.00		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4341		1582	4516		1583	4410		1583	4389	
Flt Permitted	0.11	1.00		0.12	1.00		0.11	1.00		0.12	1.00	
Satd. Flow (perm)	190	4341		192	4516		183	4410		193	4389	
Volume (vph)	130	1122	184	119	2085	43	519	1619	214	86	1718	186
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	137	1181	194	125	2195	45	546	1704	225	91	1808	196
RTOR Reduction (vph)	0	23	0	0	2	0	0	16	0	0	13	0
Lane Group Flow (vph)	137	1352	0	125	2238	0	546	1913	0	91	1991	0
Conf. Peds. (#/hr)	145		118	118		145	145		73	73		145
Conf. Bikes (#/hr)			4			7			3			1
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	44.2	35.5		43.6	35.2		44.5	36.5		40.7	34.6	
Effective Green, g (s)	42.7	35.0		42.1	34.7		43.5	36.5		39.7	34.6	
Actuated g/C Ratio	0.43	0.35		0.42	0.35		0.44	0.36		0.40	0.35	
Clearance Time (s)	3.0	3.5		3.0	3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	188	1519		184	1567		178	1610		148	1519	
v/s Ratio Prot	c0.06	0.31		0.05	c0.50		c0.22	0.43		0.03	0.45	
v/s Ratio Perm	0.25			0.24			c1.12			0.21		
v/c Ratio	0.73	0.89		0.68	1.43		3.07	1.19		0.61	1.31	
Uniform Delay, d1	24.1	30.7		21.2	32.6		48.7	31.8		25.3	32.7	
Progression Factor	1.02	1.17		1.64	1.26		1.84	0.91		1.00	1.00	
Incremental Delay, d2	10.5	7.7		5.5	195.4		936.7	87.6		5.2	144.6	
Delay (s)	35.1	43.6		40.1	236.4		1026.5	116.5		30.5	177.3	
Level of Service	D	D		D	F		F	F		C	F	
Approach Delay (s)		42.9			226.1			317.3			171.0	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	206.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.25		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	142.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↗↗↗		↗	↗↗↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes		0.96			0.99		1.00	0.99		1.00	0.97	
Flpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Frt		0.95			0.99		1.00	0.99		1.00	0.98	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1504			1587		1583	4459		1583	4338	
Flt Permitted		0.80			0.58		0.06	1.00		0.06	1.00	
Satd. Flow (perm)		1218			938		104	4459		104	4338	
Volume (vph)	58	150	128	181	299	51	125	2199	194	20	1743	230
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	61	158	135	191	315	54	132	2315	204	21	1835	242
RTOR Reduction (vph)	0	10	0	0	4	0	0	10	0	0	17	0
Lane Group Flow (vph)	0	344	0	0	556	0	132	2509	0	21	2060	0
Conf. Peds. (#/hr)	39		76	76		39	104		34	34		104
Conf. Bikes (#/hr)			2			2			6			4
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.0			29.0		64.2	64.2		64.2	64.2	
Effective Green, g (s)		28.0			28.0		64.0	64.0		64.0	64.0	
Actuated g/C Ratio		0.28			0.28		0.64	0.64		0.64	0.64	
Clearance Time (s)		3.0			3.0		3.8	3.8		3.8	3.8	
Vehicle Extension (s)		3.0			3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		341			263		67	2854		67	2776	
v/s Ratio Prot								0.56			0.47	
v/s Ratio Perm		0.28			c0.59		c1.27			0.20		
v/c Ratio		1.01			2.12		1.97	0.88		0.31	0.74	
Uniform Delay, d1		36.0			36.0		18.0	14.8		8.1	12.3	
Progression Factor		1.00			1.00		1.00	1.00		1.54	1.59	
Incremental Delay, d2		50.9			514.7		485.6	4.3		1.1	0.2	
Delay (s)		86.9			550.7		503.6	19.1		13.6	19.8	
Level of Service		F			F		F	B		B	B	
Approach Delay (s)		86.9			550.7			43.2			19.8	
Approach LOS		F			F			D			B	

Intersection Summary			
HCM Average Control Delay	87.4	HCM Level of Service	F
HCM Volume to Capacity ratio	2.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	125.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕↕		↖	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	1.00		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4484		1583	4536		1583	4532		1583	4462	
Flt Permitted	0.15	1.00		0.13	1.00		0.11	1.00		0.12	1.00	
Satd. Flow (perm)	256	4484		222	4536		188	4532		196	4462	
Volume (vph)	264	1522	164	200	2448	52	179	2121	56	97	1688	250
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	272	1569	169	206	2524	54	185	2187	58	100	1740	258
RTOR Reduction (vph)	0	14	0	0	2	0	0	3	0	0	17	0
Lane Group Flow (vph)	272	1724	0	206	2576	0	185	2242	0	100	1981	0
Turn Type	Perm		pm+pt		pm+pt		pm+pt		pm+pt			
Protected Phases	6		5		2		3		8		7	
Permitted Phases	6		2				8				4	
Actuated Green, G (s)	25.0	25.0		36.0	36.0		41.4	34.4		38.6	33.0	
Effective Green, g (s)	26.0	26.0		37.0	37.0		42.4	35.4		39.6	34.0	
Actuated g/C Ratio	0.29	0.29		0.41	0.41		0.47	0.39		0.44	0.38	
Clearance Time (s)	5.0	5.0		3.5	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	1295		197	1865		197	1783		173	1686	
v/s Ratio Prot		0.38		0.08	c0.57		c0.07	c0.49		0.04	0.44	
v/s Ratio Perm	c1.06			0.35			0.37			0.22		
v/c Ratio	3.68	1.33		1.05	1.38		0.94	1.26		0.58	1.17	
Uniform Delay, d1	32.0	32.0		43.7	26.5		43.3	27.3		21.5	28.0	
Progression Factor	0.71	0.70		1.00	1.00		1.70	0.29		1.00	1.00	
Incremental Delay, d2	1218.5	151.4		76.7	174.9		8.6	116.3		4.6	85.2	
Delay (s)	1241.1	173.8		120.4	201.4		82.3	124.3		26.1	113.2	
Level of Service	F	F		F	F		F	F		C	F	
Approach Delay (s)		318.2			195.4			121.1			109.1	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	183.1	HCM Level of Service	F
HCM Volume to Capacity ratio	2.03		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	137.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↗	↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3091		1583	3130		1583	4513		1583	4481	
Flt Permitted	0.15	1.00		0.13	1.00		0.12	1.00		0.14	1.00	
Satd. Flow (perm)	255	3091		221	3130		202	4513		230	4481	
Volume (vph)	96	891	169	174	1512	126	374	2187	125	99	1717	194
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	99	919	174	179	1559	130	386	2255	129	102	1770	200
RTOR Reduction (vph)	0	17	0	0	1	0	0	7	0	0	10	0
Lane Group Flow (vph)	99	1076	0	179	1688	0	386	2377	0	102	1960	0
Turn Type	Perm		pm+pt		pm+pt		Perm					
Protected Phases	8		7		4		1		6		2	
Permitted Phases	8		4				6				2	
Actuated Green, G (s)	25.1	25.1		38.0	38.0		42.0	42.0		28.0	28.0	
Effective Green, g (s)	26.1	26.1		39.0	39.0		43.0	43.0		29.0	29.0	
Actuated g/C Ratio	0.29	0.29		0.43	0.43		0.48	0.48		0.32	0.32	
Clearance Time (s)	5.0	5.0		3.0	5.0		4.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	896		230	1356		250	2156		74	1444	
v/s Ratio Prot		0.35		0.08	c0.54		c0.17	0.53			0.44	
v/s Ratio Perm	0.39			0.26			c0.57			0.44		
v/c Ratio	1.34	1.20		0.78	1.25		1.54	1.10		1.38	1.36	
Uniform Delay, d1	31.9	31.9		21.3	25.5		42.2	23.5		30.5	30.5	
Progression Factor	1.00	1.00		0.75	0.94		1.00	1.00		0.99	0.98	
Incremental Delay, d2	218.9	101.1		1.6	110.9		263.8	53.9		177.9	161.2	
Delay (s)	250.9	133.1		17.5	135.0		306.0	77.4		208.2	191.1	
Level of Service	F	F		B	F		F	E		F	F	
Approach Delay (s)		142.9			123.8			109.2			191.9	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	139.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	137.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		0.98	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3091		1557	3101		1583	3139		1569	3029	
Flt Permitted	0.06	1.00		0.29	1.00		0.09	1.00		0.13	1.00	
Satd. Flow (perm)	100	3091		483	3101		147	3139		220	3029	
Volume (vph)	80	615	76	72	1479	129	119	822	34	99	836	154
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	90	691	85	81	1662	145	134	924	38	111	939	173
RTOR Reduction (vph)	0	8	0	0	5	0	0	2	0	0	9	0
Lane Group Flow (vph)	90	768	0	81	1802	0	134	960	0	111	1103	0
Conf. Peds. (#/hr)	50		54	54		50	54		50	50		54
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	6		2		2		8		8		4	
Permitted Phases	6		2		2		8		8		4	
Actuated Green, G (s)	64.6	64.6		64.6	64.6		44.1	44.1		44.1	44.1	
Effective Green, g (s)	66.5	66.5		66.5	66.5		45.5	45.5		45.5	45.5	
Actuated g/C Ratio	0.55	0.55		0.55	0.55		0.38	0.38		0.38	0.38	
Clearance Time (s)	5.9	5.9		5.9	5.9		5.4	5.4		5.4	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	55	1713		268	1718		56	1190		83	1148	
v/s Ratio Prot		0.25			0.58			0.31			0.36	
v/s Ratio Perm	c0.90			0.17			c0.91			0.51		
v/c Ratio	1.64	0.45		0.30	1.05		2.39	0.81		1.34	0.96	
Uniform Delay, d1	26.8	15.9		14.3	26.8		37.2	33.3		37.2	36.4	
Progression Factor	1.00	1.00		0.41	0.74		1.17	1.15		1.00	1.00	
Incremental Delay, d2	354.4	0.9		0.3	23.8		664.6	4.4		213.1	18.7	
Delay (s)	381.1	16.7		6.1	43.7		708.3	42.8		250.3	55.1	
Level of Service	F	B		A	D		F	D		F	E	
Approach Delay (s)		54.6			42.1			124.1			72.8	
Approach LOS		D			D			F			E	

Intersection Summary

HCM Average Control Delay	69.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	112.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1583	4531		1583	4542			1614			1596	
Flt Permitted	0.06	1.00		0.16	1.00			0.97			0.95	
Satd. Flow (perm)	100	4531		269	4542			1572			1526	
Volume (vph)	21	1280	36	44	2633	32	19	179	52	22	112	50
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	22	1333	38	46	2743	33	20	186	54	23	117	52
RTOR Reduction (vph)	0	3	0	0	1	0	0	10	0	0	3	0
Lane Group Flow (vph)	22	1368	0	46	2775	0	0	250	0	0	189	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	68.0	68.0		68.0	68.0			26.0			26.0	
Effective Green, g (s)	67.0	67.0		67.0	67.0			25.0			25.0	
Actuated g/C Ratio	0.67	0.67		0.67	0.67			0.25			0.25	
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0			3.0			3.0	
Lane Grp Cap (vph)	67	3036		180	3043			393			382	
v/s Ratio Prot		0.30			c0.61							
v/s Ratio Perm	0.22			0.17				c0.16			0.12	
v/c Ratio	0.33	0.45		0.26	0.91			0.64			0.49	
Uniform Delay, d1	7.0	7.8		6.6	14.0			33.4			32.1	
Progression Factor	0.57	0.30		0.25	0.76			1.00			1.00	
Incremental Delay, d2	9.0	0.3		0.3	0.5			7.7			4.5	
Delay (s)	13.0	2.7		2.0	11.2			41.1			36.6	
Level of Service	B	A		A	B			D			D	
Approach Delay (s)		2.8			11.1			41.1			36.6	
Approach LOS		A			B			D			D	

Intersection Summary

HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3167	1417	1583	4550	1417	1583	1667	1417	1583	1642	
Flt Permitted	0.23	1.00	1.00	0.25	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	388	3167	1417	412	4550	1417	1583	1667	1417	1583	1642	
Volume (vph)	86	625	78	108	1423	92	70	598	35	40	725	78
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	92	672	84	116	1530	99	75	643	38	43	780	84
RTOR Reduction (vph)	0	0	60	0	0	71	0	0	21	0	7	0
Lane Group Flow (vph)	92	672	24	116	1530	28	75	643	17	43	857	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4			4		1	2			1	6
Permitted Phases	4		4	4		4			2			
Actuated Green, G (s)	16.2	16.2	16.2	16.2	16.2	16.2	3.4	26.6	26.6	3.4	26.6	
Effective Green, g (s)	17.2	17.2	17.2	17.2	17.2	17.2	3.4	27.4	27.4	3.4	27.4	
Actuated g/C Ratio	0.29	0.29	0.29	0.29	0.29	0.29	0.06	0.46	0.46	0.06	0.46	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.8	4.8	4.0	4.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	908	406	118	1304	406	90	761	647	90	750	
v/s Ratio Prot		0.21			c0.34		c0.05	0.39		0.03	c0.52	
v/s Ratio Perm	0.24		0.02	0.28		0.02			0.01			
v/c Ratio	0.83	0.74	0.06	0.98	1.17	0.07	0.83	0.84	0.03	0.48	1.14	
Uniform Delay, d1	20.0	19.4	15.5	21.3	21.4	15.6	28.0	14.4	9.0	27.4	16.3	
Progression Factor	1.00	1.00	1.00	1.18	1.27	1.62	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	48.3	5.4	0.3	70.2	84.9	0.3	45.4	11.1	0.1	4.0	79.9	
Delay (s)	68.3	24.8	15.8	95.3	112.1	25.5	73.4	25.5	9.0	31.4	96.2	
Level of Service	E	C	B	F	F	C	E	C	A	C	F	
Approach Delay (s)		28.6			106.0			29.5			93.2	
Approach LOS		C			F			C			F	
Intersection Summary												
HCM Average Control Delay			74.3				HCM Level of Service			E		
HCM Volume to Capacity ratio			1.13									
Actuated Cycle Length (s)			60.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			104.7%				ICU Level of Service		G			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕		↖	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Fr _t	1.00	0.98		1.00	1.00		1.00	0.98		1.00	0.98	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4478		1583	4529		1583	3109		1583	3099	
Fl _t Permitted	0.09	1.00		0.10	1.00		0.13	1.00		0.15	1.00	
Satd. Flow (perm)	154	4478		173	4529		215	3109		243	3099	
Volume (vph)	91	1166	138	63	2410	78	175	688	96	53	791	131
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	98	1254	148	68	2591	84	188	740	103	57	851	141
RTOR Reduction (vph)	0	14	0	0	3	0	0	10	0	0	14	0
Lane Group Flow (vph)	98	1388	0	68	2672	0	188	833	0	57	978	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	50.8	44.4		50.0	44.0		40.0	32.0		35.2	29.6	
Effective Green, g (s)	48.8	43.4		48.0	43.0		38.0	31.0		33.2	28.6	
Actuated g/C Ratio	0.49	0.43		0.48	0.43		0.38	0.31		0.33	0.29	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	152	1943		154	1947		177	964		142	886	
v/s Ratio Prot	c0.03	0.31		0.02	c0.59		c0.07	0.27		0.02	0.32	
v/s Ratio Perm	0.28			0.19			c0.33			0.11		
v/c Ratio	0.64	0.71		0.44	1.37		1.06	0.86		0.40	1.10	
Uniform Delay, d ₁	23.4	23.2		16.3	28.5		27.8	32.5		24.6	35.7	
Progression Factor	2.14	2.01		1.34	1.51		1.00	1.00		1.00	1.00	
Incremental Delay, d ₂	5.5	1.8		0.3	168.9		85.1	10.2		0.7	63.0	
Delay (s)	55.6	48.4		22.0	212.0		112.8	42.7		25.3	98.7	
Level of Service	E	D		C	F		F	D		C	F	
Approach Delay (s)		48.9			207.2			55.5			94.7	
Approach LOS		D			F			E			F	

Intersection Summary

HCM Average Control Delay	126.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	112.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4481		1583	4542		1583	3074		1583	3094	
Flt Permitted	0.11	1.00		0.10	1.00		0.14	1.00		0.17	1.00	
Satd. Flow (perm)	186	4481		174	4542		240	3074		275	3094	
Volume (vph)	72	1480	165	223	2566	31	147	902	219	49	827	150
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	77	1574	176	237	2730	33	156	960	233	52	880	160
RTOR Reduction (vph)	0	16	0	0	1	0	0	22	0	0	16	0
Lane Group Flow (vph)	77	1734	0	237	2762	0	156	1171	0	52	1024	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	42.5	36.9		47.3	39.3		36.1	28.8		29.5	25.2	
Effective Green, g (s)	40.5	35.9		45.3	38.3		34.7	27.8		27.5	24.2	
Actuated g/C Ratio	0.45	0.40		0.50	0.43		0.39	0.31		0.31	0.27	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	155	1787		197	1933		195	950		132	832	
v/s Ratio Prot	0.03	0.39		c0.09	c0.61		c0.06	c0.38		0.01	0.33	
v/s Ratio Perm	0.20			0.51			0.25			0.11		
v/c Ratio	0.50	0.97		1.20	1.43		0.80	1.23		0.39	1.23	
Uniform Delay, d1	21.5	26.5		21.5	25.9		23.1	31.1		25.7	32.9	
Progression Factor	1.00	1.00		1.95	0.41		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	15.4		96.0	193.2		19.4	113.9		0.7	114.3	
Delay (s)	22.4	41.9		138.0	203.7		42.6	145.0		26.4	147.2	
Level of Service	C	D		F	F		D	F		C	F	
Approach Delay (s)		41.1			198.5			133.1			141.4	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	138.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	114.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕	↖	↖	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.98		1.00	1.00		1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	4468		1583	4536		1583	1667	1417	1583	2997	
Flt Permitted	0.09	1.00		0.10	1.00		0.12	1.00	1.00	0.13	1.00	
Satd. Flow (perm)	156	4468		170	4536		206	1667	1417	218	2997	
Volume (vph)	89	1167	159	69	2614	54	144	500	91	49	605	336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	94	1228	167	73	2752	57	152	526	96	52	637	354
RTOR Reduction (vph)	0	17	0	0	2	0	0	0	65	0	75	0
Lane Group Flow (vph)	94	1378	0	73	2807	0	152	526	31	52	916	0
Turn Type	pm+pt			pm+pt			pm+pt			Perm	pm+pt	
Protected Phases	5	2		1	6		3	8	8		7	4
Permitted Phases	2			6			8		8		4	
Actuated Green, G (s)	49.4	43.8		49.4	43.8		40.4	33.4	33.4		36.8	31.6
Effective Green, g (s)	47.4	42.8		47.4	42.8		38.4	32.4	32.4		34.8	30.6
Actuated g/C Ratio	0.47	0.43		0.47	0.43		0.38	0.32	0.32		0.35	0.31
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0	3.0		2.0	3.0
Lane Grp Cap (vph)	140	1912		146	1941		162	540	459		133	917
v/s Ratio Prot	c0.03	0.31		0.02	c0.62		c0.06	c0.32			0.02	0.31
v/s Ratio Perm	0.29			0.21			0.30		0.02		0.12	
v/c Ratio	0.67	0.72		0.50	1.45		0.94	0.97	0.07		0.39	1.00
Uniform Delay, d1	23.9	23.7		16.8	28.6		26.5	33.4	23.4		24.6	34.7
Progression Factor	0.81	1.11		2.10	1.73		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	8.2	2.0		0.1	201.0		51.6	32.8	0.3		0.7	29.5
Delay (s)	27.4	28.3		35.4	250.4		78.2	66.2	23.6		25.3	64.2
Level of Service	C	C		D	F		E	E	C		C	E
Approach Delay (s)		28.2			244.9			63.3				62.2
Approach LOS		C			F			E				E

Intersection Summary

HCM Average Control Delay	139.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	116.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	2222		1118	2232		1118	2177		1118	2231	
Flt Permitted	0.07	1.00		0.10	1.00		0.27	1.00		0.66	1.00	
Satd. Flow (perm)	77	2222		113	2232		317	2177		781	2231	
Volume (vph)	27	1516	65	53	2133	22	10	112	23	114	505	7
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	28	1563	67	55	2199	23	10	115	24	118	521	7
RTOR Reduction (vph)	0	4	0	0	1	0	0	18	0	0	1	0
Lane Group Flow (vph)	28	1626	0	55	2221	0	10	121	0	118	527	0
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	60.5	60.5		60.5	60.5		20.8	20.8		20.8	20.8	
Effective Green, g (s)	61.0	61.0		61.0	61.0		21.0	21.0		21.0	21.0	
Actuated g/C Ratio	0.68	0.68		0.68	0.68		0.23	0.23		0.23	0.23	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	52	1506		77	1513		74	508		182	521	
v/s Ratio Prot		0.73			c1.00			0.06			c0.24	
v/s Ratio Perm	0.36			0.49			0.03			0.15		
v/c Ratio	0.54	1.08		0.71	1.47		0.14	0.24		0.65	1.01	
Uniform Delay, d1	7.4	14.5		9.1	14.5		27.3	28.0		31.2	34.5	
Progression Factor	0.35	0.37		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.6	37.4		43.6	214.3		3.8	1.1		16.5	42.4	
Delay (s)	6.2	42.7		52.7	228.8		31.1	29.1		47.7	76.9	
Level of Service	A	D		D	F		C	C		D	E	
Approach Delay (s)		42.1			224.6			29.2			71.6	
Approach LOS		D			F			C			E	

Intersection Summary

HCM Average Control Delay	133.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	131.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						0.95			0.95	
Frbp, ped/bikes		1.00						1.00			1.00	
Flpb, ped/bikes		0.98						1.00			1.00	
Frt		0.99						0.97			1.00	
Flt Protected		0.98						1.00			0.99	
Satd. Flow (prot)		3021						3067			3146	
Flt Permitted		0.98						1.00			0.90	
Satd. Flow (perm)		3021						3067			2853	
Volume (vph)	228	222	17	0	0	0	0	115	26	38	283	0
Peak-hour factor, PHF	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Adj. Flow (vph)	296	288	22	0	0	0	0	149	34	49	368	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	604	0	0	0	0	0	158	0	0	417	0
Conf. Peds. (#/hr)	28		18	18			28	6		7	7	6
Conf. Bikes (#/hr)			1							1		1
Turn Type	Perm						Perm					
Protected Phases		2						8			4	
Permitted Phases	2									4		
Actuated Green, G (s)		37.0						17.0			17.0	
Effective Green, g (s)		36.0						16.0			16.0	
Actuated g/C Ratio		0.60						0.27			0.27	
Clearance Time (s)		3.0						3.0			3.0	
Vehicle Extension (s)		5.0						3.0			3.0	
Lane Grp Cap (vph)		1813						818			761	
v/s Ratio Prot								0.05				
v/s Ratio Perm		0.20									c0.15	
v/c Ratio		0.33						0.19			0.55	
Uniform Delay, d1		6.0						17.0			18.9	
Progression Factor		1.08						1.00			1.00	
Incremental Delay, d2		0.4						0.5			2.8	
Delay (s)		6.9						17.5			21.7	
Level of Service		A						B			C	
Approach Delay (s)		6.9			0.0			17.5			21.7	
Approach LOS		A			A			B			C	
Intersection Summary												
HCM Average Control Delay			13.6					HCM Level of Service			B	
HCM Volume to Capacity ratio			0.40									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)		8.0		
Intersection Capacity Utilization			57.5%					ICU Level of Service		B		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑				↖		↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0				4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91				1.00		1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99				0.97		1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		0.98	1.00
Frt	1.00	1.00		1.00	0.98				0.86		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00				1.00		0.95	1.00
Satd. Flow (prot)	1583	4527		1583	4403				1396		1559	1371
Flt Permitted	0.95	1.00		0.95	1.00				1.00		0.95	1.00
Satd. Flow (perm)	1583	4527		1583	4403				1396		1559	1371
Volume (vph)	65	1328	26	109	2465	449	0	0	47	117	2	166
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	68	1383	27	114	2568	468	0	0	49	122	2	173
RTOR Reduction (vph)	0	2	0	0	23	0	0	0	38	0	0	133
Lane Group Flow (vph)	68	1408	0	114	3013	0	0	0	11	0	124	40
Confl. Peds. (#/hr)	18		42	42		18	15		14	14		15
Confl. Bikes (#/hr)			2			1			1			
Turn Type	Prot			Prot				custom	Perm		Perm	
Protected Phases	5	2		1	6						4	
Permitted Phases								8	4			4
Actuated Green, G (s)	7.6	56.0		11.0	59.4			24.0			24.0	24.0
Effective Green, g (s)	6.6	55.0		10.0	58.4			23.0			23.0	23.0
Actuated g/C Ratio	0.07	0.55		0.10	0.58			0.23			0.23	0.23
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Vehicle Extension (s)	2.0	5.0		2.0	5.0			3.0			3.0	3.0
Lane Grp Cap (vph)	104	2490		158	2571			321			359	315
v/s Ratio Prot	0.04	0.31		c0.07	c0.68							
v/s Ratio Perm								0.01			0.08	0.03
v/c Ratio	0.65	0.57		0.72	1.17			0.04			0.35	0.13
Uniform Delay, d1	45.6	14.7		43.6	20.8			29.9			32.2	30.5
Progression Factor	1.00	1.00		0.70	1.66			1.00			1.00	1.00
Incremental Delay, d2	10.7	0.9		1.3	77.8			0.2			2.6	0.8
Delay (s)	56.3	15.6		32.0	112.4			30.1			34.8	31.4
Level of Service	E	B		C	F			C			C	C
Approach Delay (s)		17.5			109.5			30.1			32.8	
Approach LOS		B			F			C			C	

Intersection Summary			
HCM Average Control Delay	76.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	97.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	2230		1118	2233		1118	2217		1118	2202	
Flt Permitted	0.07	1.00		0.07	1.00		0.15	1.00		0.29	1.00	
Satd. Flow (perm)	84	2230		84	2233		181	2217		336	2202	
Volume (vph)	32	1617	25	282	1931	15	26	533	31	26	732	81
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	33	1650	26	288	1970	15	27	544	32	27	747	83
RTOR Reduction (vph)	0	1	0	0	1	0	0	5	0	0	9	0
Lane Group Flow (vph)	33	1675	0	288	1984	0	27	571	0	27	821	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			8		4
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	55.5	55.5		55.5	55.5		25.8	25.8		25.8	25.8	
Effective Green, g (s)	56.0	56.0		56.0	56.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio	0.62	0.62		0.62	0.62		0.29	0.29		0.29	0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	52	1388		52	1389		52	640		97	636	
v/s Ratio Prot		0.75			0.89			0.26			c0.37	
v/s Ratio Perm	0.39			c3.43			0.15			0.08		
v/c Ratio	0.63	1.21		5.54	1.43		0.52	0.89		0.28	1.29	
Uniform Delay, d1	10.6	17.0		17.0	17.0		26.8	30.7		24.7	32.0	
Progression Factor	1.00	1.00		0.58	0.59		0.44	0.36		1.00	1.00	
Incremental Delay, d2	46.8	100.0		2046.1	193.2		12.8	7.3		7.0	142.3	
Delay (s)	57.4	117.0		2055.9	203.2		24.6	18.4		31.8	174.3	
Level of Service	E	F		F	F		C	B		C	F	
Approach Delay (s)		115.9			438.0			18.7			169.8	
Approach LOS		F			F			B			F	

Intersection Summary

HCM Average Control Delay	248.1	HCM Level of Service	F
HCM Volume to Capacity ratio	4.17		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	142.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↗	↕		↗	↕	↗		↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00		0.95	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1118	2204		1118	2231		1118	2235	1000		2210	
Flt Permitted	0.07	1.00		0.25	1.00		0.15	1.00	1.00		1.00	
Satd. Flow (perm)	84	2204		294	2231		181	2235	1000		2210	
Volume (vph)	55	782	80	200	1760	24	65	511	97	0	939	76
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	869	89	222	1956	27	72	568	108	0	1043	84
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	77	0	6	0
Lane Group Flow (vph)	61	955	0	222	1982	0	72	568	31	0	1121	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			8		4
Permitted Phases	2			6			8			8		
Actuated Green, G (s)	55.5	55.5		55.5	55.5		25.8	25.8	25.8		25.8	
Effective Green, g (s)	56.0	56.0		56.0	56.0		26.0	26.0	26.0		26.0	
Actuated g/C Ratio	0.62	0.62		0.62	0.62		0.29	0.29	0.29		0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2	4.2		4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	52	1371		183	1388		52	646	289		638	
v/s Ratio Prot		0.43			c0.89			0.25			c0.51	
v/s Ratio Perm	0.73			0.76			0.40		0.03			
v/c Ratio	1.17	0.70		1.21	1.43		1.38	0.88	0.11		1.76	
Uniform Delay, d1	17.0	11.3		17.0	17.0		32.0	30.5	23.5		32.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		0.63	
Incremental Delay, d2	179.6	3.0		135.5	196.8		257.0	15.7	0.8		341.0	
Delay (s)	196.6	14.3		152.5	213.8		289.0	46.2	24.2		361.3	
Level of Service	F	B		F	F		F	D	C		F	
Approach Delay (s)		25.2			207.6			66.4			361.3	
Approach LOS		C			F			E			F	

Intersection Summary

HCM Average Control Delay	184.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	150.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						0.95			0.95	
Frbp, ped/bikes		0.99						0.98			1.00	
Flpb, ped/bikes		0.99						1.00			1.00	
Frt		0.94						0.97			1.00	
Flt Protected		1.00						1.00			0.99	
Satd. Flow (prot)		2928						2992			3144	
Flt Permitted		1.00						1.00			0.65	
Satd. Flow (perm)		2928						2992			2060	
Volume (vph)	35	184	129	0	0	0	0	776	219	86	679	0
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	38	202	142	0	0	0	0	853	241	95	746	0
RTOR Reduction (vph)	0	63	0	0	0	0	0	43	0	0	0	0
Lane Group Flow (vph)	0	319	0	0	0	0	0	1051	0	0	841	0
Confl. Peds. (#/hr)	123		3	3			123	1		108	108	1
Confl. Bikes (#/hr)							6			4		2
Turn Type		Perm									Perm	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		27.0						27.0			27.0	
Effective Green, g (s)		26.0						26.0			26.0	
Actuated g/C Ratio		0.43						0.43			0.43	
Clearance Time (s)		3.0						3.0			3.0	
Vehicle Extension (s)		3.0						3.0			3.0	
Lane Grp Cap (vph)		1269						1297			893	
v/s Ratio Prot								0.35				
v/s Ratio Perm		0.11									c0.41	
v/c Ratio		0.25						0.81			0.94	
Uniform Delay, d1		10.8						14.8			16.3	
Progression Factor		0.98						1.00			1.00	
Incremental Delay, d2		0.4						5.6			18.9	
Delay (s)		11.0						20.4			35.2	
Level of Service		B						C			D	
Approach Delay (s)		11.0			0.0			20.4			35.2	
Approach LOS		B			A			C			D	
Intersection Summary												
HCM Average Control Delay			24.2					HCM Level of Service			C	
HCM Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)		8.0		
Intersection Capacity Utilization			84.4%					ICU Level of Service		E		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖		↖	↖↖↖		↖	↖↖	↖		↖↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00		0.95	1.00
Frbp, ped/bikes	1.00	0.97		1.00	0.99		1.00	1.00	0.86		1.00	0.86
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1583	4333		1583	4477		1583	3167	1219		3167	1220
Flt Permitted	0.09	1.00		0.08	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	152	4333		140	4477		1583	3167	1219		3167	1220
Volume (vph)	61	1214	219	329	2162	91	261	914	117	0	768	189
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	64	1265	228	343	2252	95	272	952	122	0	800	197
RTOR Reduction (vph)	0	26	0	0	4	0	0	0	80	0	0	123
Lane Group Flow (vph)	64	1467	0	343	2343	0	272	952	42	0	800	74
Conf. Peds. (#/hr)	181		118	118		181	96		97	97		96
Conf. Bikes (#/hr)						3			1			1
Turn Type	pm+pt			pm+pt			Prot		Perm			Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases	2			6				8				4
Actuated Green, G (s)	50.4	45.0		57.0	48.6		8.9	34.9	34.9		22.9	22.9
Effective Green, g (s)	48.4	44.0		55.6	47.6		8.0	34.0	34.0		22.0	22.0
Actuated g/C Ratio	0.49	0.45		0.57	0.49		0.08	0.35	0.35		0.22	0.22
Clearance Time (s)	3.0	3.0		3.0	3.0		3.1	3.1	3.1		3.1	3.1
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	139	1945		197	2175		129	1099	423		711	274
v/s Ratio Prot	0.02	0.34		c0.14	0.52		c0.17	0.30			c0.25	
v/s Ratio Perm	0.21			c0.84					0.03			0.06
v/c Ratio	0.46	0.75		1.74	1.08		2.11	0.87	0.10		1.13	0.27
Uniform Delay, d1	21.1	22.5		24.8	25.2		45.0	29.9	21.6		38.0	31.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.9	2.8		353.7	43.9		524.1	9.2	0.5		73.7	2.4
Delay (s)	21.9	25.3		378.5	69.1		569.1	39.1	22.1		111.7	33.8
Level of Service	C	C		F	E		F	D	C		F	C
Approach Delay (s)		25.1			108.5			144.6			96.3	
Approach LOS		C			F			F			F	

Intersection Summary			
HCM Average Control Delay	94.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.67		
Actuated Cycle Length (s)	98.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	106.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕		↕	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.95			0.98		1.00	1.00		1.00	0.99	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2986			3061		1583	3153		1583	3133	
Flt Permitted		0.85			0.76		0.14	1.00		0.12	1.00	
Satd. Flow (perm)		2552			2355		241	3153		192	3133	
Volume (vph)	29	107	69	207	286	55	112	1240	36	44	1005	78
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	30	110	71	213	295	57	115	1278	37	45	1036	80
RTOR Reduction (vph)	0	49	0	0	10	0	0	2	0	0	6	0
Lane Group Flow (vph)	0	162	0	0	555	0	115	1313	0	45	1110	0
Turn Type	Perm		Perm			pm+pt		pm+pt				
Protected Phases	4		8			5		2		1		6
Permitted Phases	4		8			2		6				
Actuated Green, G (s)	29.0		29.0			54.6		48.3		49.4		45.7
Effective Green, g (s)	28.0		28.0			52.6		47.3		47.4		44.7
Actuated g/C Ratio	0.31		0.31			0.58		0.53		0.53		0.50
Clearance Time (s)	3.0		3.0			3.0		3.0		3.0		3.0
Vehicle Extension (s)	3.0		3.0			2.0		5.0		2.0		5.0
Lane Grp Cap (vph)	794		733			220		1657		143		1556
v/s Ratio Prot						c0.03		c0.42		0.01		0.35
v/s Ratio Perm	0.06		c0.24			0.28		0.16				
v/c Ratio	0.20		0.76			0.52		0.79		0.31		0.71
Uniform Delay, d1	22.8		27.9			11.6		17.4		12.9		17.7
Progression Factor	1.00		1.00			1.00		1.00		1.00		1.00
Incremental Delay, d2	0.6		4.5			1.0		4.0		0.5		2.8
Delay (s)	23.4		32.4			12.6		21.3		13.4		20.5
Level of Service	C		C			B		C		B		C
Approach Delay (s)	23.4		32.4			20.6		20.2				
Approach LOS	C		C			C		C				

Intersection Summary

HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶		↶	↶↶			↶↶	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95			0.95	
Frt	1.00	0.99		1.00	1.00		1.00	0.99			0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1583	4524		1583	4550		1583	3122			3054	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1583	4524		1583	4550		1583	3122			3054	
Volume (vph)	52	1826	72	10	3170	0	40	675	70	0	383	120
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	53	1844	73	10	3202	0	40	682	71	0	387	121
RTOR Reduction (vph)	0	5	0	0	0	0	0	8	0	0	33	0
Lane Group Flow (vph)	53	1912	0	10	3202	0	40	745	0	0	475	0
Turn Type	Prot		Prot		Split							
Protected Phases	1!	2!		5!	6!		8	8				7
Permitted Phases												
Actuated Green, G (s)	7.2	31.8		4.8	33.2		14.0	14.0			22.0	
Effective Green, g (s)	6.7	31.3		4.8	33.2		14.0	14.0			22.0	
Actuated g/C Ratio	0.07	0.35		0.05	0.37		0.16	0.16			0.24	
Clearance Time (s)	3.5	3.5		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	118	1573		84	1678		246	486			747	
v/s Ratio Prot	c0.03	0.42		0.01	c0.70		0.03	c0.24			c0.16	
v/s Ratio Perm												
v/c Ratio	0.45	1.22		0.12	1.91		0.16	1.53			0.64	
Uniform Delay, d1	39.9	29.4		40.6	28.4		32.9	38.0			30.4	
Progression Factor	1.25	0.97		1.51	0.38		1.00	1.00			1.00	
Incremental Delay, d2	0.2	97.7		0.1	408.9		0.3	249.6			4.1	
Delay (s)	50.2	126.2		61.5	419.7		33.2	287.6			34.5	
Level of Service	D	F		E	F		C	F			C	
Approach Delay (s)		124.1			418.6			274.8			34.5	
Approach LOS		F			F			F			C	

Intersection Summary

HCM Average Control Delay	281.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.7%	ICU Level of Service	F
Analysis Period (min)	15		

- ! Phase conflict between lane groups.
- c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↓		↑	↑↑↓		↑	↑↓		↑	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt		0.99		1.00	0.99		1.00	0.99		1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4520		1583	4516		1583	3146		1583	3167	
Flt Permitted		1.00		0.95	1.00		0.33	1.00		0.18	1.00	
Satd. Flow (perm)		4520		1583	4516		553	3146		303	3167	
Volume (vph)	0	1800	82	26	2886	149	263	931	42	74	447	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1895	86	27	3038	157	277	980	44	78	471	0
RTOR Reduction (vph)	0	5	0	0	6	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	1976	0	27	3189	0	277	1020	0	78	471	0
Turn Type				Prot			Perm			Perm		
Protected Phases		2!		5!	6		7		7		7	
Permitted Phases							7			7		
Actuated Green, G (s)		31.8		4.8	33.2		22.0	22.0		22.0	22.0	
Effective Green, g (s)		31.3		4.8	33.2		22.0	22.0		22.0	22.0	
Actuated g/C Ratio		0.35		0.05	0.37		0.24	0.24		0.24	0.24	
Clearance Time (s)		3.5		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1572		84	1666		135	769		74	774	
v/s Ratio Prot		0.44		c0.02	c0.71			0.32			0.15	
v/s Ratio Perm							c0.50			0.26		
v/c Ratio		1.26		0.32	1.91		2.05	1.33		1.05	0.61	
Uniform Delay, d1		29.4		41.0	28.4		34.0	34.0		34.0	30.2	
Progression Factor		0.32		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		116.1		2.2	413.7		498.1	156.0		120.3	3.5	
Delay (s)		125.4		43.2	442.1		532.1	190.0		154.3	33.7	
Level of Service		F		D	F		F	F		F	C	
Approach Delay (s)		125.4			438.8			262.8			50.8	
Approach LOS		F			F			F			D	

Intersection Summary

HCM Average Control Delay	288.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	110.9%	ICU Level of Service	H
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕		↕	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0		4.0	4.0	
Lane Util. Factor		0.95						0.95		1.00	0.95	
Frbp, ped/bikes		1.00						0.97		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		0.95	1.00	
Frt		1.00						0.94		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		3133						2890		1507	3167	
Flt Permitted		1.00						1.00		0.64	1.00	
Satd. Flow (perm)		3133						2890		1013	3167	
Volume (vph)	16	303	5	0	0	0	0	93	62	59	425	0
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	19	352	6	0	0	0	0	108	72	69	494	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	53	0	0	0	0
Lane Group Flow (vph)	0	375	0	0	0	0	0	127	0	69	494	0
Conf. Peds. (#/hr)	51		52	52			51	5		55	55	
Conf. Bikes (#/hr)							3					5
Turn Type		Perm									Perm	
Protected Phases		2						4			4	
Permitted Phases		2									4	
Actuated Green, G (s)		17.0						17.0		17.0	17.0	
Effective Green, g (s)		16.0						16.0		16.0	16.0	
Actuated g/C Ratio		0.27						0.27		0.27	0.27	
Clearance Time (s)		3.0						3.0		3.0	3.0	
Vehicle Extension (s)		5.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		835						771		270	845	
v/s Ratio Prot								0.04			c0.16	
v/s Ratio Perm		0.12								0.07		
v/c Ratio		0.45						0.16		0.26	0.58	
Uniform Delay, d1		18.3						16.9		17.3	19.1	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		1.7						0.5		2.3	3.0	
Delay (s)		20.1						17.3		19.6	22.1	
Level of Service		C						B		B	C	
Approach Delay (s)		20.1			0.0			17.3			21.8	
Approach LOS		C			A			B			C	

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗			↗↖↗		↖	↗		↖	↗	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91			0.91		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00			0.99		1.00	0.90		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			1.00		0.84	1.00		1.00	1.00	1.00
Frt	1.00	1.00			1.00		1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4525			4511		1333	1420		1583	1667	1102
Flt Permitted	0.08	1.00			1.00		0.62	1.00		0.95	1.00	1.00
Satd. Flow (perm)	130	4525			4511		874	1420		1583	1667	1102
Volume (vph)	39	1273	14	0	2476	47	105	76	42	90	208	110
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	41	1326	15	0	2579	49	109	79	44	94	217	115
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	0	0	0	0
Lane Group Flow (vph)	41	1340	0	0	2626	0	109	123	0	94	217	115
Conf. Peds. (#/hr)	244		131	131		244	166		211	211		166
Conf. Bikes (#/hr)			3			5			2			3
Turn Type	Perm			Perm			Prot			custom		
Protected Phases	2			6			8			7		
Permitted Phases	2						8			4 4		
Actuated Green, G (s)	52.2	52.2			52.2		21.0	21.0		7.8	31.8	31.8
Effective Green, g (s)	51.2	51.2			51.2		20.0	20.0		6.8	30.8	30.8
Actuated g/C Ratio	0.57	0.57			0.57		0.22	0.22		0.08	0.34	0.34
Clearance Time (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Vehicle Extension (s)	5.0	5.0			5.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	2574			2566		194	316		120	570	377
v/s Ratio Prot		0.30			c0.58			0.09		c0.06		
v/s Ratio Perm	0.31						c0.12				0.13	0.10
v/c Ratio	0.55	0.52			1.02		0.56	0.39		0.78	0.38	0.31
Uniform Delay, d1	12.2	11.9			19.4		31.1	29.8		40.9	22.4	21.7
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	26.7	0.8			24.0		11.3	3.6		27.6	1.9	2.1
Delay (s)	38.9	12.6			43.4		42.4	33.4		68.4	24.3	23.8
Level of Service	D	B			D		D	C		E	C	C
Approach Delay (s)		13.4			43.4			37.6			33.9	
Approach LOS		B			D			D			C	

Intersection Summary			
HCM Average Control Delay	33.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR2
Lane Configurations		↔	↔↔↔		↔	↔↔↔			↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0			4.0
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frbp, ped/bikes		1.00	1.00		1.00	0.99			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	1.00		1.00	0.99			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1583	4521		1583	4482			1442
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1583	4521		1583	4482			1442
Volume (vph)	343	242	1325	36	576	1910	42	41	101
Peak-hour factor, PHF	0.92	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.92
Adj. Flow (vph)	373	252	1380	38	600	1990	44	43	110
RTOR Reduction (vph)	0	0	3	0	0	2	0	0	97
Lane Group Flow (vph)	0	625	1415	0	600	2075	0	0	13
Conf. Peds. (#/hr)	63	81		28	28		63	81	35
Conf. Bikes (#/hr)				5			9	10	1
Turn Type	Prot	Prot			Prot				custom
Protected Phases	1	1	2		8	6			1
Permitted Phases									
Actuated Green, G (s)		13.0	52.0		26.0	81.0			13.0
Effective Green, g (s)		12.0	51.0		25.0	80.0			12.0
Actuated g/C Ratio		0.12	0.51		0.25	0.80			0.12
Clearance Time (s)		3.0	3.0		3.0	3.0			3.0
Vehicle Extension (s)		2.5	5.0		3.0	5.0			2.5
Lane Grp Cap (vph)		190	2306		396	3586			173
v/s Ratio Prot		c0.39	c0.31		c0.38	0.46			0.01
v/s Ratio Perm									
v/c Ratio		3.29	0.61		1.52	0.58			0.08
Uniform Delay, d1		44.0	17.5		37.5	3.7			39.1
Progression Factor		1.25	1.96		1.00	1.00			1.00
Incremental Delay, d2		1031.5	0.1		244.5	0.7			0.1
Delay (s)		1086.5	34.4		282.0	4.4			39.2
Level of Service		F	C		F	A			D
Approach Delay (s)			356.2			66.6			
Approach LOS			F			E			
Intersection Summary									
HCM Average Control Delay			188.5			HCM Level of Service			F
HCM Volume to Capacity ratio			1.24						
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			12.0
Intersection Capacity Utilization			101.9%			ICU Level of Service			G
Analysis Period (min)			15						
c Critical Lane Group									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↔↕↗		↗	↔↕↗			↕↕	↗		↔↕↗	↗
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	0.86	0.86		1.00	0.91			0.95	1.00		0.86	0.86
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	961	3016		1118	3192			2235	1000		3035	860
Flt Permitted	0.95	0.69		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	961	2080		1118	3192			2235	1000		3035	860
Volume (vph)	730	1839	16	264	1835	79	0	995	164	0	1707	817
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	760	1916	17	275	1911	82	0	1036	171	0	1778	851
RTOR Reduction (vph)	0	1	0	0	4	0	0	0	121	0	0	319
Lane Group Flow (vph)	535	2157	0	275	1989	0	0	1036	50	0	1778	532
Turn Type	Prot		Prot				Perm				Over	
Protected Phases	7	4		3	8			2			6	7
Permitted Phases							2					
Actuated Green, G (s)	20.9	36.4		20.9	36.4			28.4	28.4		28.4	20.9
Effective Green, g (s)	22.0	37.0		22.0	37.0			29.0	29.0		29.0	22.0
Actuated g/C Ratio	0.22	0.37		0.22	0.37			0.29	0.29		0.29	0.22
Clearance Time (s)	5.1	4.6		5.1	4.6			4.6	4.6		4.6	5.1
Vehicle Extension (s)	3.0	3.0		5.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	211	976		246	1181			648	290		880	189
v/s Ratio Prot	0.56	0.49		0.25	c0.62			0.46			c0.59	c0.62
v/s Ratio Perm	c0.33						0.05					
v/c Ratio	2.54	2.21		1.12	1.68			1.60	0.17		2.02	2.81
Uniform Delay, d1	39.0	31.5		39.0	31.5			35.5	26.5		35.5	39.0
Progression Factor	1.00	1.00		1.04	0.58			1.00	1.00		1.00	1.00
Incremental Delay, d2	704.8	548.0		58.7	308.1			276.7	1.3		463.2	831.1
Delay (s)	743.8	579.5		99.4	326.3			312.2	27.8		498.7	870.1
Level of Service	F	F		F	F			F	C		F	F
Approach Delay (s)	612.2		298.7				271.9				618.9	
Approach LOS	F		F				F				F	

Intersection Summary

HCM Average Control Delay	486.7	HCM Level of Service	F
HCM Volume to Capacity ratio	2.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	191.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔↔		↔	↔↔↔		↔	↔↔	↔	↔	↔↔	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85	1.00	0.95	
Flt Protected		0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3153		1118	3208		1118	2235	1000	1118	2130	
Flt Permitted		0.72		0.95	1.00		0.14	1.00	1.00	0.37	1.00	
Satd. Flow (perm)		2301		1118	3208		162	2235	1000	439	2130	
Volume (vph)	500	1323	66	241	1508	13	68	432	289	27	930	428
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	526	1393	69	254	1587	14	72	455	304	28	979	451
RTOR Reduction (vph)	0	4	0	0	1	0	0	0	216	0	54	0
Lane Group Flow (vph)	0	1984	0	254	1600	0	72	455	88	28	1376	0
Turn Type		Prot		Prot		Perm		Perm	Perm			
Protected Phases		7	4	3	8			2			6	
Permitted Phases							2		2		6	
Actuated Green, G (s)		36.4		20.9	36.4		28.4	28.4	28.4		28.4	
Effective Green, g (s)		37.0		22.0	37.0		29.0	29.0	29.0		29.0	
Actuated g/C Ratio		0.37		0.22	0.37		0.29	0.29	0.29		0.29	
Clearance Time (s)		4.6		5.1	4.6		4.6	4.6	4.6		4.6	
Vehicle Extension (s)		3.0		5.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		1039		246	1187		47	648	290	127	618	
v/s Ratio Prot		c0.42		0.23	c0.50			0.20			c0.65	
v/s Ratio Perm		c0.29					0.44		0.09	0.06		
v/c Ratio		1.91		1.03	1.35		1.53	0.70	0.30	0.22	2.23	
Uniform Delay, d1		31.5		39.0	31.5		35.5	31.6	27.6	26.9	35.5	
Progression Factor		0.61		0.93	1.39		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		409.7		60.6	161.4		321.5	6.3	2.7	4.0	557.2	
Delay (s)		429.0		96.7	205.1		357.0	37.9	30.3	30.9	592.7	
Level of Service		F		F	F		F	D	C	C	F	
Approach Delay (s)		429.0			190.2			62.8			581.9	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	343.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	193.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.86	0.97	0.88
Frbp, ped/bikes		1.00	0.97	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)		4047	968	2168	4047	2168	1760
Flt Permitted		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)		4047	968	2168	4047	2168	1760
Volume (vph)	0	1653	558	1269	2171	224	416
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1704	575	1308	2238	231	429
RTOR Reduction (vph)	0	0	48	0	0	0	307
Lane Group Flow (vph)	0	1704	527	1308	2238	231	122
Conf. Peds. (#/hr)			33	33			38
Conf. Bikes (#/hr)			14				1
Turn Type	Prot		pm+ov	Prot			Over
Protected Phases	1	6	4	3	2 3	4	3
Permitted Phases			6				
Actuated Green, G (s)		39.0	69.1	35.0	80.0	30.1	35.0
Effective Green, g (s)		41.0	74.0	34.0	79.0	33.0	34.0
Actuated g/C Ratio		0.34	0.62	0.28	0.66	0.28	0.28
Clearance Time (s)		6.0	6.9	3.0		6.9	3.0
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1383	629	614	2664	596	499
v/s Ratio Prot		c0.42	c0.23	c0.60	0.55	0.11	0.07
v/s Ratio Perm			0.31				
v/c Ratio		1.23	0.84	2.13	0.84	0.39	0.24
Uniform Delay, d1		39.5	18.2	43.0	15.7	35.3	33.1
Progression Factor		0.45	1.43	1.00	1.00	1.00	1.00
Incremental Delay, d2		107.3	4.3	514.1	2.6	0.4	0.3
Delay (s)		125.0	30.4	557.1	18.2	35.7	33.4
Level of Service		F	C	F	B	D	C
Approach Delay (s)		101.1			217.0	34.2	
Approach LOS		F			F	C	
Intersection Summary							
HCM Average Control Delay			157.7		HCM Level of Service		F
HCM Volume to Capacity ratio			1.41				
Actuated Cycle Length (s)			120.0		Sum of lost time (s)		12.0
Intersection Capacity Utilization			124.9%		ICU Level of Service		H
Analysis Period (min)			15				
c Critical Lane Group							



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘		↖		↖	↑↑↑		↖	↑↑	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0				4.0	4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	0.88				1.00	0.91			0.95	1.00
Frt	1.00	1.00	0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1504	1504	2493				1583	4550			3167	1417
Flt Permitted	0.95	0.95	1.00				0.48	1.00			1.00	1.00
Satd. Flow (perm)	1504	1504	2493				799	4550			3167	1417
Volume (vph)	157	0	102	0	0	0	407	1171	0	0	365	566
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	178	0	116	0	0	0	462	1331	0	0	415	643
RTOR Reduction (vph)	0	0	98	0	0	0	0	0	0	0	0	492
Lane Group Flow (vph)	89	89	18	0	0	0	462	1331	0	0	415	151
Turn Type	Split	custom					pm+pt			Perm		Over
Protected Phases	4	4	7	1		3	5	2			6	4
Permitted Phases							2			6		
Actuated Green, G (s)	16.5	16.5	13.3				46.8	41.8			41.8	16.5
Effective Green, g (s)	17.1	17.1	13.9				48.0	43.0			43.0	17.1
Actuated g/C Ratio	0.19	0.19	0.15				0.53	0.48			0.48	0.19
Clearance Time (s)	4.6	4.6					4.0	5.2			5.2	4.6
Vehicle Extension (s)	3.0	3.0					3.0	3.2			3.4	3.0
Lane Grp Cap (vph)	286	286	385				470	2174			1513	269
v/s Ratio Prot	0.06	0.06	c0.01				c0.05	0.29			0.13	c0.11
v/s Ratio Perm							c0.47					
v/c Ratio	0.31	0.31	0.05				0.98	0.61			0.27	0.56
Uniform Delay, d1	31.4	31.4	32.4				19.6	17.3			14.1	33.1
Progression Factor	0.93	0.93	1.20				1.22	1.15			1.00	1.00
Incremental Delay, d2	0.9	0.9	0.0				33.1	1.1			0.4	8.3
Delay (s)	30.0	30.0	39.0				57.1	21.0			14.6	41.3
Level of Service	C	C	D				E	C			B	D
Approach Delay (s)		33.6			0.0			30.3			30.8	
Approach LOS		C			A			C			C	

Intersection Summary

HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑		↑↑	↑↑↑		↑↑	↑↑	↑↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.86		0.97	0.91		0.97	0.95	0.88
Frt		1.00	0.85		0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		4550	1417		5611		3072	4452		3072	3167	2493
Flt Permitted		1.00	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		4550	1417		5611		3072	4452		3072	3167	2493
Volume (vph)	0	2047	110	0	2999	499	442	550	92	452	502	378
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	2089	112	0	3060	509	451	561	94	461	512	386
RTOR Reduction (vph)	0	0	51	0	33	0	0	2	0	0	0	3
Lane Group Flow (vph)	0	2089	61	0	3536	0	451	653	0	461	512	383
Turn Type		pm+ov					Prot			Prot		Perm
Protected Phases		6	3		2		3	8		7	4	
Permitted Phases		6										4
Actuated Green, G (s)		35.5	47.5		35.5		12.0	27.7		12.0	27.7	27.7
Effective Green, g (s)		37.0	49.0		37.0		12.0	29.0		12.0	29.0	29.0
Actuated g/C Ratio		0.41	0.54		0.41		0.13	0.32		0.13	0.32	0.32
Clearance Time (s)		5.5	4.0		5.5		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)		4.9	3.0		5.2		3.0	5.1		3.0	5.1	5.1
Lane Grp Cap (vph)		1871	834		2307		410	1435		410	1020	803
v/s Ratio Prot		0.46	0.01		c0.63		0.15	0.15		c0.15	c0.16	
v/s Ratio Perm			0.03									0.15
v/c Ratio		1.12	0.07		1.53		1.10	0.46		1.12	0.50	0.48
Uniform Delay, d1		26.5	9.7		26.5		39.0	24.2		39.0	24.7	24.4
Progression Factor		1.00	1.00		0.33		1.00	1.00		0.97	0.82	0.81
Incremental Delay, d2		60.4	0.0		239.9		74.3	1.0		82.8	0.8	1.0
Delay (s)		86.9	9.8		248.7		113.3	25.3		120.7	21.0	20.8
Level of Service		F	A		F		F	C		F	C	C
Approach Delay (s)		83.0			248.7		61.1			54.8		
Approach LOS		F			F		E			D		

Intersection Summary

HCM Average Control Delay	147.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	97.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰	↑↑↑	↱	↰↱	↑↑↑	↰↱	↰↱
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.86	1.00	0.97	0.91	0.94	0.88
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1118	4047	1000	2168	3212	3152	1760
Flt Permitted	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1118	4047	1000	2168	3212	3152	1760
Volume (vph)	8	1717	777	314	2025	284	497
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	8	1734	785	317	2045	287	502
RTOR Reduction (vph)	0	0	493	0	0	0	392
Lane Group Flow (vph)	8	1734	292	317	2045	287	110
Conf. Peds. (#/hr)			55	55		1	214
Conf. Bikes (#/hr)			15				7
Turn Type	Prot		Over	Prot		Over	
Protected Phases	1	6	8	5	2	8	5
Permitted Phases							
Actuated Green, G (s)	1.0	46.0	30.1	26.3	70.3	30.1	26.3
Effective Green, g (s)	2.0	48.7	33.0	26.3	73.0	33.0	26.3
Actuated g/C Ratio	0.02	0.41	0.28	0.22	0.61	0.28	0.22
Clearance Time (s)	5.0	6.7	6.9	4.0	6.7	6.9	4.0
Vehicle Extension (s)	3.0	5.0	3.0	3.0	5.0	3.0	3.0
Lane Grp Cap (vph)	19	1642	275	475	1954	867	386
v/s Ratio Prot	0.01	c0.43	c0.29	0.15	c0.64	0.09	0.06
v/s Ratio Perm							
v/c Ratio	0.42	1.06	1.06	0.67	1.05	0.33	0.29
Uniform Delay, d1	58.4	35.6	43.5	42.8	23.5	34.7	39.0
Progression Factor	0.49	1.36	6.26	1.10	1.33	1.00	1.00
Incremental Delay, d2	1.4	27.0	35.7	2.1	29.4	0.2	0.4
Delay (s)	29.7	75.5	308.2	49.1	60.7	34.9	39.4
Level of Service	C	E	F	D	E	C	D
Approach Delay (s)		147.6			59.1	37.8	
Approach LOS		F			E	D	
Intersection Summary							
HCM Average Control Delay			95.6		HCM Level of Service		F
HCM Volume to Capacity ratio			1.04				
Actuated Cycle Length (s)			120.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization			101.3%		ICU Level of Service		G
Analysis Period (min)			15				
c Critical Lane Group							



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↘↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	0.97	0.91	0.91
Frbp, ped/bikes	1.00	1.00	0.95	1.00	1.00	0.90	1.00	1.00	0.90	1.00	0.93	0.93
Flpb, ped/bikes	0.99	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91	0.91
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1572	3167	1349	1560	3167	1272	3072	4550	1274	3072	3831	3831
Flt Permitted	0.27	1.00	1.00	0.31	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	448	3167	1349	506	3167	1272	3072	4550	1274	3072	3831	3831
Volume (vph)	102	757	145	265	526	33	258	1324	588	244	137	213
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	115	851	163	298	591	37	290	1488	661	274	154	239
RTOR Reduction (vph)	0	0	70	0	0	25	0	0	50	0	162	0
Lane Group Flow (vph)	115	851	93	298	591	12	290	1488	611	274	231	0
Confl. Peds. (#/hr)	95		51	51		95	92		76	76		92
Confl. Bikes (#/hr)			2						2			5
Turn Type	pm+pt		pm+ov	Perm		Perm	Prot		Perm	Prot		
Protected Phases	1	6	3		2		3	8		7	4	
Permitted Phases	6		6	2		2			8			
Actuated Green, G (s)	38.8	38.8	49.9	28.5	28.5	28.5	11.1	26.2	26.2	11.0	26.1	26.1
Effective Green, g (s)	40.3	40.3	51.4	30.0	30.0	30.0	11.1	26.7	26.7	11.0	26.6	26.6
Actuated g/C Ratio	0.45	0.45	0.57	0.33	0.33	0.33	0.12	0.30	0.30	0.12	0.30	0.30
Clearance Time (s)	3.5	5.5	4.0	5.5	5.5	5.5	4.0	4.5	4.5	4.0	4.5	4.5
Vehicle Extension (s)	3.0	4.0	2.0	4.0	4.0	4.0	2.0	3.0	3.0	2.0	3.0	3.0
Lane Grp Cap (vph)	279	1418	830	169	1056	424	379	1350	378	375	1132	1132
v/s Ratio Prot	0.03	c0.27	0.01		0.19		0.09	0.33		c0.09	0.06	0.06
v/s Ratio Perm	0.16		0.06	c0.59		0.01			c0.48			
v/c Ratio	0.41	0.60	0.11	1.76	0.56	0.03	0.77	1.10	1.62	0.73	0.20	0.20
Uniform Delay, d1	15.8	18.8	8.8	30.0	24.6	20.2	38.2	31.6	31.6	38.1	23.8	23.8
Progression Factor	1.50	1.48	4.32	1.07	1.07	1.11	1.05	0.76	0.71	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.4	0.0	350.7	0.2	0.0	5.3	53.8	285.2	6.2	0.4	0.4
Delay (s)	24.3	28.2	38.3	382.8	26.5	22.4	45.4	77.8	307.6	44.3	24.2	24.2
Level of Service	C	C	D	F	C	C	D	E	F	D	C	C
Approach Delay (s)		29.2			141.0			136.3			32.4	
Approach LOS		C			F			F			C	

Intersection Summary			
HCM Average Control Delay	100.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↘	↑↑↑	↗	↘	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)					4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor					1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frt					1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected					0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)					1583	1417	1583	4550	1417	1583	4550	
Flt Permitted					0.76	1.00	0.38	1.00	1.00	0.07	1.00	
Satd. Flow (perm)					1262	1417	638	4550	1417	116	4550	
Volume (vph)	0	0	0	152	0	291	2	1918	43	16	587	0
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	171	0	327	2	2155	48	18	660	0
RTOR Reduction (vph)	0	0	0	0	0	6	0	0	17	0	0	0
Lane Group Flow (vph)	0	0	0	0	171	321	2	2155	31	18	660	0
Turn Type	Perm			Perm			Perm	Perm	Perm		Perm	
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4	2		2	2		
Actuated Green, G (s)					23.3	23.3	56.7	56.7	56.7	56.7	56.7	
Effective Green, g (s)					24.3	24.3	57.7	57.7	57.7	57.7	57.7	
Actuated g/C Ratio					0.27	0.27	0.64	0.64	0.64	0.64	0.64	
Clearance Time (s)					5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)					3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)					341	383	409	2917	908	74	2917	
v/s Ratio Prot								c0.47			0.15	
v/s Ratio Perm					0.14	c0.23	0.00		0.02	0.16		
v/c Ratio					0.50	0.84	0.00	0.74	0.03	0.24	0.23	
Uniform Delay, d1					27.7	31.0	5.8	11.0	5.9	6.9	6.8	
Progression Factor					1.00	1.00	0.46	0.73	0.38	0.83	0.83	
Incremental Delay, d2					1.2	14.8	0.0	1.1	0.0	4.0	0.1	
Delay (s)					28.9	45.8	2.7	9.1	2.3	9.7	5.7	
Level of Service					C	D	A	A	A	A	A	
Approach Delay (s)		0.0			40.0			9.0			5.8	
Approach LOS		A			D			A			A	

Intersection Summary

HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕	↗	↖	↕↕↕		↖↖	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95	0.95	1.00	0.91		0.97	0.91	
Frt		0.92			0.94	0.85	1.00	0.99		1.00	0.97	
Flt Protected		0.98			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2855			1458	1346	1583	4486		3072	4408	
Flt Permitted		0.88			0.85	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2544			1265	1346	1583	4486		3072	4408	
Volume (vph)	5	2	9	95	36	419	57	1501	157	39	570	150
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	6	2	10	108	41	476	65	1706	178	44	648	170
RTOR Reduction (vph)	0	8	0	0	30	1	0	11	0	0	39	0
Lane Group Flow (vph)	0	10	0	0	215	379	65	1873	0	44	779	0
Turn Type	Perm		Perm		pm+ov		Prot		Prot			
Protected Phases	8		4		4	5	1	6	5		2	
Permitted Phases	8		4		4							
Actuated Green, G (s)	19.4				19.4	27.6	7.9	48.2	8.2		48.5	
Effective Green, g (s)	20.9				20.9	29.1	7.9	48.9	8.2		49.2	
Actuated g/C Ratio	0.23				0.23	0.32	0.09	0.54	0.09		0.55	
Clearance Time (s)	5.5				5.5	4.0	4.0	4.7	4.0		4.7	
Vehicle Extension (s)	3.0				3.0	3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	591				294	495	139	2437	280		2410	
v/s Ratio Prot					c0.07		0.04	c0.42	0.01		0.18	
v/s Ratio Perm	0.00				0.17	0.21						
v/c Ratio	0.02				0.73	0.76	0.47	0.77	0.16		0.32	
Uniform Delay, d1	26.6				32.0	27.4	39.0	16.1	37.7		11.2	
Progression Factor	1.00				1.00	1.00	1.39	0.27	0.80		1.68	
Incremental Delay, d2	0.0				9.0	6.9	1.2	1.1	0.3		0.3	
Delay (s)	26.6				41.0	34.3	55.4	5.4	30.5		19.2	
Level of Service	C				D	C	E	A	C		B	
Approach Delay (s)	26.6				36.9		7.1				19.8	
Approach LOS	C				D		A				B	

Intersection Summary

HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔		↔	↔		↔	↔↔	↔↔↔		↔	↔↔↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97		1.00	1.00		1.00	0.97	0.91		1.00	0.91	
Frt	1.00		0.85	1.00		0.85	1.00	1.00		1.00	0.95	
Flt Protected	0.95		1.00	0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3072		1417	1583		1417	3072	4534		1583	4306	
Flt Permitted	0.95		1.00	0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3072		1417	1583		1417	3072	4534		1583	4306	
Volume (vph)	14	0	12	25	0	104	210	1621	38	14	428	238
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	17	0	15	31	0	128	259	2001	47	17	528	294
RTOR Reduction (vph)	0	0	13	0	0	84	0	2	0	0	100	0
Lane Group Flow (vph)	17	0	2	31	0	44	259	2046	0	17	722	0
Turn Type	Prot		custom	Prot		custom	Prot			Prot		
Protected Phases	3		3 5	4		1 4	5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	3.8		13.8	20.3		31.8	10.0	41.4		6.6	38.0	
Effective Green, g (s)	4.7		13.9	21.2		31.0	9.2	42.3		5.8	38.9	
Actuated g/C Ratio	0.05		0.15	0.24		0.34	0.10	0.47		0.06	0.43	
Clearance Time (s)	4.9			4.9			3.2	4.9		3.2	4.9	
Vehicle Extension (s)	3.0			3.0			3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	160		219	373		488	314	2131		102	1861	
v/s Ratio Prot	c0.01		0.00	0.02		c0.03	c0.08	c0.45		0.01	0.17	
v/s Ratio Perm												
v/c Ratio	0.11		0.01	0.08		0.09	0.82	0.96		0.17	0.39	
Uniform Delay, d1	40.6		32.2	26.8		20.0	39.6	23.0		39.8	17.4	
Progression Factor	1.00		1.00	1.00		1.00	1.46	0.57		1.25	0.49	
Incremental Delay, d2	0.3		0.0	0.1		0.1	1.7	1.7		0.7	0.6	
Delay (s)	40.9		32.2	26.9		20.0	59.7	14.7		50.4	9.2	
Level of Service	D		C	C		C	E	B		D	A	
Approach Delay (s)		36.9			21.4			19.7			10.0	
Approach LOS		D			C			B			B	

Intersection Summary

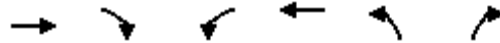
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔↔	↑↑↑	↑↑↑↔		↔↔	↔↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.91	0.91		0.97	0.88
Frt	1.00	1.00	0.96		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3072	4550	4377		3072	2493
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3072	4550	4377		3072	2493
Volume (vph)	1341	1720	1580	538	103	227
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1490	1911	1756	598	114	252
RTOR Reduction (vph)	0	0	61	0	0	182
Lane Group Flow (vph)	1490	1911	2293	0	114	70
Turn Type	Prot					Prot
Protected Phases	5	2 5	6		4	4
Permitted Phases						
Actuated Green, G (s)	12.0	55.5	38.5		24.0	24.0
Effective Green, g (s)	13.0	57.0	40.0		25.0	25.0
Actuated g/C Ratio	0.14	0.63	0.44		0.28	0.28
Clearance Time (s)	5.0		5.5		5.0	5.0
Vehicle Extension (s)	2.0		3.0		3.0	3.0
Lane Grp Cap (vph)	444	2882	1945		853	693
v/s Ratio Prot	c0.49	0.42	c0.52		c0.04	0.03
v/s Ratio Perm						
v/c Ratio	3.36	0.66	1.18		0.13	0.10
Uniform Delay, d1	38.5	10.4	25.0		24.4	24.1
Progression Factor	1.00	1.00	1.00		1.39	3.90
Incremental Delay, d2	1065.9	1.2	86.2		0.1	0.1
Delay (s)	1104.4	11.6	111.2		34.1	94.1
Level of Service	F	B	F		C	F
Approach Delay (s)		490.4	111.2		75.4	
Approach LOS		F	F		E	

Intersection Summary

HCM Average Control Delay	319.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↓	↑↑↑	↑↓	↑
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	0.97	0.91
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3212	1000	2168	3212	2168	910
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3212	1000	2168	3212	2168	910
Volume (vph)	2487	880	240	2014	389	116
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	2538	898	245	2055	397	118
RTOR Reduction (vph)	0	319	0	0	0	89
Lane Group Flow (vph)	2538	579	245	2055	397	30
Confl. Peds. (#/hr)		59	59		11	
Confl. Bikes (#/hr)		14				
Turn Type		Over	Prot			Perm
Protected Phases	6	4	5	2	4	
Permitted Phases						4
Actuated Green, G (s)	60.0	28.1	16.8	80.8	28.1	28.1
Effective Green, g (s)	61.2	30.0	16.8	82.0	30.0	30.0
Actuated g/C Ratio	0.51	0.25	0.14	0.68	0.25	0.25
Clearance Time (s)	5.2	5.9	4.0	5.2	5.9	5.9
Vehicle Extension (s)	3.7	3.8	1.0	3.5	3.8	3.8
Lane Grp Cap (vph)	1638	250	304	2195	542	228
v/s Ratio Prot	c0.79	c0.58	0.11	c0.64	0.18	
v/s Ratio Perm						0.03
v/c Ratio	1.55	2.32	0.81	0.94	0.73	0.13
Uniform Delay, d1	29.4	45.0	50.0	16.7	41.3	34.9
Progression Factor	1.61	1.58	1.27	0.52	1.00	1.00
Incremental Delay, d2	247.5	593.8	5.9	4.2	8.5	1.2
Delay (s)	295.0	664.8	69.5	12.9	49.8	36.0
Level of Service	F	F	E	B	D	D
Approach Delay (s)	391.6			18.9	46.7	
Approach LOS	F			B	D	

Intersection Summary

HCM Average Control Delay	226.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	116.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

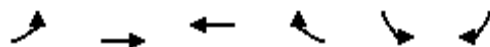


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↖↗	↕	↖	↗	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.88	0.95	1.00	1.00	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3072	2493	3167	1417	1583	4550
Flt Permitted	0.95	1.00	1.00	1.00	0.52	1.00
Satd. Flow (perm)	3072	2493	3167	1417	869	4550
Volume (vph)	67	336	286	449	693	316
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	373	318	499	770	351
RTOR Reduction (vph)	0	319	0	12	0	0
Lane Group Flow (vph)	74	54	318	487	770	351
Turn Type		Perm		pm+ov	pm+pt	
Protected Phases	4		2	4	1	6
Permitted Phases		4		2	6	
Actuated Green, G (s)	12.6	12.6	54.4	67.0	67.4	67.4
Effective Green, g (s)	13.1	13.1	55.9	69.0	68.9	68.9
Actuated g/C Ratio	0.15	0.15	0.62	0.77	0.77	0.77
Clearance Time (s)	4.5	4.5	5.5	4.5	3.0	5.5
Vehicle Extension (s)	3.0	3.0	5.0	3.0	3.0	5.0
Lane Grp Cap (vph)	447	363	1967	1149	737	3483
v/s Ratio Prot	0.02		0.10	c0.06	c0.10	0.08
v/s Ratio Perm		0.02		0.28	c0.70	
v/c Ratio	0.17	0.15	0.16	0.42	1.04	0.10
Uniform Delay, d1	33.7	33.6	7.2	3.6	9.2	2.7
Progression Factor	0.71	2.17	0.11	2.96	1.00	1.00
Incremental Delay, d2	0.1	0.2	0.0	0.0	45.4	0.1
Delay (s)	24.0	72.9	0.8	10.8	54.6	2.7
Level of Service	C	E	A	B	D	A
Approach Delay (s)	64.8		6.9			38.4
Approach LOS	E		A			D

Intersection Summary

HCM Average Control Delay	32.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
75: Olympic Blvd & Century Park West



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔↔	↑↑↑	↑↑↑	↔	↔↔	↔↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.91	1.00	0.97	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3072	4550	4550	1417	3072	2493
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3072	4550	4550	1417	3072	2493
Volume (vph)	1170	3040	2098	206	51	124
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1206	3134	2163	212	53	128
RTOR Reduction (vph)	0	0	0	111	0	0
Lane Group Flow (vph)	1206	3134	2163	101	53	128
Turn Type	Prot		Perm		Perm	
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)	15.0	55.1	36.1	36.1	25.0	25.0
Effective Green, g (s)	15.0	56.3	37.3	37.3	25.7	25.7
Actuated g/C Ratio	0.17	0.63	0.41	0.41	0.29	0.29
Clearance Time (s)	4.0	5.2	5.2	5.2	4.7	4.7
Vehicle Extension (s)	3.0	4.8	4.6	4.6	3.0	3.0
Lane Grp Cap (vph)	512	2846	1886	587	877	712
v/s Ratio Prot	c0.39	c0.69	0.48		0.02	
v/s Ratio Perm				0.07		c0.05
v/c Ratio	2.36	1.10	1.15	0.17	0.06	0.18
Uniform Delay, d1	37.5	16.9	26.4	16.6	23.4	24.2
Progression Factor	1.56	0.78	1.00	1.00	0.89	0.91
Incremental Delay, d2	610.5	46.1	72.9	0.6	0.0	0.1
Delay (s)	669.0	59.3	99.2	17.3	20.9	22.2
Level of Service	F	E	F	B	C	C
Approach Delay (s)		228.7	91.9		21.8	
Approach LOS		F	F		C	

Intersection Summary

HCM Average Control Delay	176.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑↑↑	↔	↔	↑↑↑		↔	↑↑		↔	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4550	1417	1583	4528		1583	3111		1583	3090	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.13	1.00		0.15	1.00	
Satd. Flow (perm)	1583	4550	1417	1583	4528		215	3111		247	3090	
Volume (vph)	135	2284	403	119	2740	93	180	985	130	103	1005	194
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	136	2307	407	120	2768	94	182	995	131	104	1015	196
RTOR Reduction (vph)	0	0	153	0	3	0	0	9	0	0	13	0
Lane Group Flow (vph)	136	2307	254	120	2859	0	182	1117	0	104	1198	0
Turn Type	Prot		Perm	Prot			pm+pt			Perm		
Protected Phases	1	6		5	2		3	8			4	
Permitted Phases			6				8			4		
Actuated Green, G (s)	13.2	53.6	53.6	12.4	52.8		40.0	40.0		26.0	26.0	
Effective Green, g (s)	13.2	54.6	54.6	12.4	53.8		41.0	41.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.46	0.46	0.10	0.45		0.34	0.34		0.22	0.22	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		3.5	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	174	2070	645	164	2030		187	1063		56	695	
v/s Ratio Prot	c0.09	0.51		0.08	c0.63		0.08	c0.36			0.39	
v/s Ratio Perm			0.18				0.25			c0.42		
v/c Ratio	0.78	1.11	0.39	0.73	1.41		0.97	1.05		1.86	1.72	
Uniform Delay, d1	52.0	32.7	21.7	52.2	33.1		57.0	39.5		46.5	46.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.49	1.41		1.00	1.00	
Incremental Delay, d2	18.7	58.9	1.8	13.5	186.8		13.9	25.8		446.0	331.6	
Delay (s)	70.7	91.6	23.5	65.7	219.9		99.1	81.6		492.5	378.1	
Level of Service	E	F	C	E	F		F	F		F	F	
Approach Delay (s)		80.9			213.7			84.0			387.2	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	175.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	132.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕↕↕	↖	↖↗	↕↕↕	↖	↖↗	↕↕	↖	↖↗	↕↕	↖
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3212	1000	2168	3212	1000	2168	2235	1000	2168	2235	1000
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2168	3212	1000	2168	3212	1000	2168	2235	1000	2168	2235	1000
Volume (vph)	71	2377	192	41	2083	251	105	1036	179	736	1247	98
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	72	2426	196	42	2126	256	107	1057	183	751	1272	100
RTOR Reduction (vph)	0	0	71	0	0	34	0	0	109	0	0	48
Lane Group Flow (vph)	72	2426	125	42	2126	222	107	1057	74	751	1272	52
Turn Type	Prot		Perm	Prot		pm+ov	Prot		Perm	Prot		Perm
Protected Phases	1	6		5	2	7	3	8		7		4
Permitted Phases			6			2			8			4
Actuated Green, G (s)	6.2	29.7	29.7	8.8	32.3	54.3	9.8	39.6	39.6	22.0	51.8	51.8
Effective Green, g (s)	6.2	31.2	31.2	8.8	33.8	55.8	9.8	42.0	42.0	22.0	54.2	54.2
Actuated g/C Ratio	0.05	0.26	0.26	0.07	0.28	0.46	0.08	0.35	0.35	0.18	0.45	0.45
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5	4.0	4.0	6.4	6.4	4.0	6.4	6.4
Vehicle Extension (s)	2.0	4.5	4.5	2.0	5.2	2.0	2.0	4.7	4.7	2.0	4.7	4.7
Lane Grp Cap (vph)	112	835	260	159	905	465	177	782	350	397	1009	452
v/s Ratio Prot	0.03	c0.76		0.02	c0.66	0.09	0.05	c0.47		c0.35	0.57	
v/s Ratio Perm			0.12			0.13			0.07			0.05
v/c Ratio	0.64	2.91	0.48	0.26	2.35	0.48	0.60	1.35	0.21	1.89	1.26	0.12
Uniform Delay, d1	55.8	44.4	37.5	52.5	43.1	22.1	53.2	39.0	27.4	49.0	32.9	19.0
Progression Factor	1.21	1.62	2.51	0.91	0.94	0.69	1.00	1.00	1.00	0.77	0.65	0.13
Incremental Delay, d2	0.9	857.7	0.6	0.1	608.5	0.1	4.0	166.6	0.6	404.2	119.9	0.1
Delay (s)	68.6	929.6	95.0	48.0	648.9	15.4	57.2	205.6	28.0	442.0	141.4	2.6
Level of Service	E	F	F	D	F	B	E	F	C	F	F	A
Approach Delay (s)		845.9			571.6			169.7			241.2	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	512.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	161.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.86		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	5732		1583	3167	1417	1583	3167	1417
Flt Permitted	0.12	1.00	1.00	0.12	1.00		0.25	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	197	4550	1417	202	5732		421	3167	1417	215	3167	1417
Volume (vph)	267	3384	104	47	2437	5	75	990	198	320	928	304
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	270	3418	105	47	2462	5	76	1000	200	323	937	307
RTOR Reduction (vph)	0	0	36	0	0	0	0	0	4	0	0	0
Lane Group Flow (vph)	270	3418	69	47	2467	0	76	1000	196	323	937	307
Turn Type	pm+pt		Perm	pm+pt		Perm		pm+ov	pm+pt		pm+ov	
Protected Phases	1	6		5	2			8	5	7	4	1
Permitted Phases	6		6	2		8	8	8	4			4
Actuated Green, G (s)	40.3	33.3	33.3	38.7	32.5	25.5	25.5	31.7	36.5	36.5	43.5	
Effective Green, g (s)	40.8	33.8	33.8	39.2	33.0	27.0	27.0	33.2	38.0	38.0	45.0	
Actuated g/C Ratio	0.45	0.38	0.38	0.44	0.37	0.30	0.30	0.37	0.42	0.42	0.50	
Clearance Time (s)	4.0	4.5	4.5	4.0	4.5	5.5	5.5	4.0	4.0	5.5	4.0	
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	5.0	3.0	3.0	5.0	3.0	
Lane Grp Cap (vph)	197	1709	532	183	2102	126	950	586	197	1337	771	
v/s Ratio Prot	c0.11	c0.75		0.02	0.43		0.32	0.02	c0.13	0.30	0.03	
v/s Ratio Perm	0.51		0.05	0.09		0.18		0.12	c0.56		0.19	
v/c Ratio	1.37	2.00	0.13	0.26	1.17	0.60	1.05	0.33	1.64	0.70	0.40	
Uniform Delay, d1	43.7	28.1	18.4	20.8	28.5	26.9	31.5	20.4	22.5	21.3	14.0	
Progression Factor	1.52	0.67	0.19	0.65	0.32	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	169.7	450.2	0.0	0.2	79.5	11.4	44.1	0.3	309.6	2.1	0.3	
Delay (s)	236.2	468.9	3.6	13.7	88.6	38.4	75.6	20.8	332.1	23.4	14.4	
Level of Service	F	F	A	B	F	D	E	C	F	C	B	
Approach Delay (s)		439.4			87.2		64.8			85.3		
Approach LOS		F			F		E			F		

Intersection Summary

HCM Average Control Delay	229.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	141.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1583	3062		1583	3158		1504	1583	1417		1641	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (perm)	1583	3062		1583	3158		1504	1583	1417		1641	
Volume (vph)	22	962	271	638	1307	24	172	185	141	35	155	10
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	1069	301	709	1452	27	191	206	157	39	172	11
RTOR Reduction (vph)	0	21	0	0	1	0	0	0	97	0	0	0
Lane Group Flow (vph)	24	1349	0	709	1478	0	191	206	60	0	222	0
Turn Type	Prot		Prot		Split		pm+ov		Split			
Protected Phases	1	6		5	2		3	3	5		4	4
Permitted Phases									3			
Actuated Green, G (s)	3.6	36.1		36.2	68.7		10.0	10.0	46.2		20.0	
Effective Green, g (s)	2.6	36.9		35.2	69.5		10.9	10.9	46.1		21.0	
Actuated g/C Ratio	0.02	0.31		0.29	0.58		0.09	0.09	0.38		0.18	
Clearance Time (s)	3.0	4.8		3.0	4.8		4.9	4.9	3.0		5.0	
Vehicle Extension (s)	3.0	6.0		3.0	6.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	34	942		464	1829		137	144	592		287	
v/s Ratio Prot	0.02	c0.44		c0.45	0.47		0.13	c0.13	0.03		c0.14	
v/s Ratio Perm									0.01			
v/c Ratio	0.71	1.43		1.53	0.81		1.39	1.43	0.10		0.77	
Uniform Delay, d1	58.3	41.5		42.4	20.0		54.5	54.5	23.7		47.2	
Progression Factor	0.81	0.87		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	5.9	195.1		248.3	4.0		215.6	228.9	0.1		12.2	
Delay (s)	53.4	231.3		290.7	23.9		270.2	283.5	23.8		59.4	
Level of Service	D	F		F	C		F	F	C		E	
Approach Delay (s)		228.3			110.4			205.3			59.4	
Approach LOS		F			F			F			E	

Intersection Summary

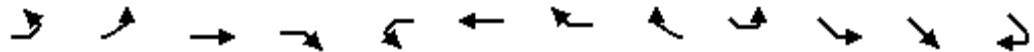
HCM Average Control Delay	157.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	115.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖		↖	↖		↖	↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.90		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1504	1513	1417	1583	1501		1583	1658		1583	1667	1417
Flt Permitted	0.72	0.70	1.00	0.95	1.00		0.23	1.00		0.25	1.00	1.00
Satd. Flow (perm)	1138	1105	1417	1583	1501		377	1658		413	1667	1417
Volume (vph)	261	10	36	17	20	38	80	542	21	52	587	295
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	266	10	37	17	20	39	82	553	21	53	599	301
RTOR Reduction (vph)	0	0	32	0	30	0	0	2	0	0	0	165
Lane Group Flow (vph)	133	143	5	17	29	0	82	572	0	53	599	136
Turn Type	Perm		Perm	Split			Perm			Perm		Perm
Protected Phases		4		3	3			2			2	
Permitted Phases	4		4				2			2		2
Actuated Green, G (s)	10.0	10.0	10.0	17.0	17.0		32.6	32.6		32.6	32.6	32.6
Effective Green, g (s)	11.0	11.0	11.0	18.0	18.0		34.0	34.0		34.0	34.0	34.0
Actuated g/C Ratio	0.15	0.15	0.15	0.24	0.24		0.45	0.45		0.45	0.45	0.45
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.4	5.4		5.4	5.4	5.4
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	167	162	208	380	360		171	752		187	756	642
v/s Ratio Prot				0.01	c0.02			0.35			c0.36	
v/s Ratio Perm	0.12	c0.13	0.00				0.22			0.13		0.10
v/c Ratio	0.80	0.88	0.03	0.04	0.08		0.48	0.76		0.28	0.79	0.21
Uniform Delay, d1	30.9	31.4	27.4	21.9	22.1		14.3	17.1		12.9	17.5	12.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	22.5	38.9	0.1	0.2	0.4		9.3	7.2		3.8	8.3	0.8
Delay (s)	53.5	70.3	27.5	22.1	22.5		23.6	24.3		16.6	25.8	13.2
Level of Service	D	E	C	C	C		C	C		B	C	B
Approach Delay (s)		58.1			22.4			24.2			21.3	
Approach LOS		E			C			C			C	

Intersection Summary

HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	SEL2	SEL	SET	SER
Lane Configurations			↕	↗		↕↗				↘	↕↗	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1700	1700	1700	1700	1700
Total Lost time (s)			4.0	4.0		4.0				4.0	4.0	
Lane Util. Factor			1.00	1.00		0.95				1.00	0.95	
Frt			1.00	0.85		0.99				1.00	0.99	
Flt Protected			0.99	1.00		0.98				0.95	1.00	
Satd. Flow (prot)			1167	1000		2163				1583	3131	
Flt Permitted			0.82	1.00		0.65				0.47	1.00	
Satd. Flow (perm)			960	1000		1442				785	3131	
Volume (vph)	19	37	287	10	283	359	41	20	4	34	288	23
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	20	38	296	10	292	370	42	21	4	35	297	24
RTOR Reduction (vph)	0	0	0	5	0	3	0	0	0	0	8	0
Lane Group Flow (vph)	0	0	354	5	0	722	0	0	0	39	313	0
Turn Type		Perm		Perm	Perm				Perm	Perm		
Protected Phases			6			2					4	
Permitted Phases		6		6	2				4	4		
Actuated Green, G (s)			34.0	34.0		34.0				30.0	30.0	
Effective Green, g (s)			36.0	36.0		36.0				31.0	31.0	
Actuated g/C Ratio			0.48	0.48		0.48				0.41	0.41	
Clearance Time (s)			6.0	6.0		6.0				5.0	5.0	
Vehicle Extension (s)			3.0	3.0		3.0				3.0	3.0	
Lane Grp Cap (vph)			461	480		692				324	1294	
v/s Ratio Prot											0.10	
v/s Ratio Perm			0.37	0.00		c0.50				0.05		
v/c Ratio			0.77	0.01		1.10dl				0.12	0.24	
Uniform Delay, d1			16.1	10.2		19.5				13.6	14.3	
Progression Factor			1.06	1.34		1.00				1.00	1.00	
Incremental Delay, d2			9.3	0.0		46.2				0.8	0.4	
Delay (s)			26.3	13.6		65.7				14.3	14.8	
Level of Service			C	B		E				B	B	
Approach Delay (s)			26.0			65.7					14.7	
Approach LOS			C			E					B	

Intersection Summary

HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	119.3%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	NWL	NWT	NWR	NWR2
Lane Configurations	↶	↗	↘	
Ideal Flow (vphpl)	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	
Satd. Flow (prot)	1583	1667	1417	
Flt Permitted	0.55	1.00	1.00	
Satd. Flow (perm)	912	1667	1417	
Volume (vph)	126	306	186	349
Peak-hour factor, PHF	0.97	0.97	0.97	0.97
Adj. Flow (vph)	130	315	192	360
RTOR Reduction (vph)	0	0	90	0
Lane Group Flow (vph)	130	315	462	0
Turn Type	Perm		Perm	
Protected Phases		8		
Permitted Phases	8		8	
Actuated Green, G (s)	30.0	30.0	30.0	
Effective Green, g (s)	31.0	31.0	31.0	
Actuated g/C Ratio	0.41	0.41	0.41	
Clearance Time (s)	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	
Lane Grp Cap (vph)	377	689	586	
v/s Ratio Prot		0.19		
v/s Ratio Perm	0.14		c0.33	
v/c Ratio	0.34	0.46	0.79	
Uniform Delay, d1	15.1	15.9	19.2	
Progression Factor	0.87	0.86	0.93	
Incremental Delay, d2	0.2	0.2	1.0	
Delay (s)	13.3	13.9	18.7	
Level of Service	B	B	B	
Approach Delay (s)		16.5		
Approach LOS		B		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		1.00	0.86			1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.98			0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	1.00
Satd. Flow (prot)	2168	3976		1118	3959			1152		1118	1176	1000
Flt Permitted	0.95	1.00		0.05	1.00			0.92		0.17	1.00	1.00
Satd. Flow (perm)	2168	3976		53	3959			1064		201	1176	1000
Volume (vph)	182	2386	315	96	2592	438	9	308	54	77	286	220
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	184	2410	318	97	2618	442	9	311	55	78	289	222
RTOR Reduction (vph)	0	16	0	0	13	0	0	4	0	0	0	0
Lane Group Flow (vph)	184	2712	0	97	3047	0	0	371	0	78	289	222
Turn Type	Prot		Perm			Perm			Perm		pm+ov	
Protected Phases	5	2			6			4			4	5
Permitted Phases				6			4			4		4
Actuated Green, G (s)	16.8	109.0		88.2	88.2			32.0		32.0	32.0	48.8
Effective Green, g (s)	16.8	109.0		88.2	88.2			33.0		33.0	33.0	49.8
Actuated g/C Ratio	0.11	0.73		0.59	0.59			0.22		0.22	0.22	0.33
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0		5.0	5.0	4.0
Vehicle Extension (s)	1.5	4.0		4.0	4.0			3.0		3.0	3.0	1.5
Lane Grp Cap (vph)	243	2889		31	2328			234		44	259	359
v/s Ratio Prot	0.08	c0.68			0.77						0.25	0.07
v/s Ratio Perm				c1.82				0.35		c0.39		0.15
v/c Ratio	0.76	0.94		3.13	1.31			1.59		1.77	1.12	0.62
Uniform Delay, d1	64.6	17.6		30.9	30.9			58.5		58.5	58.5	42.1
Progression Factor	1.40	0.52		1.00	1.00			1.00		1.07	1.08	0.92
Incremental Delay, d2	1.1	0.8		1036.9	142.1			283.0		409.4	84.2	1.7
Delay (s)	91.7	10.0		1067.8	173.0			341.5		472.3	147.6	40.7
Level of Service	F	A		F	F			F		F	F	D
Approach Delay (s)		15.1			200.5			341.5			150.3	
Approach LOS		B			F			F			F	

Intersection Summary

HCM Average Control Delay	127.1	HCM Level of Service	F
HCM Volume to Capacity ratio	2.54		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	148.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕	↗	↖	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00	0.57	1.00	1.00	0.88
Flpb, ped/bikes	0.96	1.00		0.99	1.00		0.95	1.00	1.00	0.75	1.00	1.00
Frt	1.00	0.95		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	1557		1569	1651		1497	3167	801	1183	3167	1248
Flt Permitted	0.62	1.00		0.46	1.00		0.44	1.00	1.00	0.43	1.00	1.00
Satd. Flow (perm)	988	1557		756	1651		692	3167	801	541	3167	1248
Volume (vph)	99	170	85	175	211	10	48	445	147	39	438	59
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	101	173	87	179	215	10	49	454	150	40	447	60
RTOR Reduction (vph)	0	24	0	0	2	0	0	0	82	0	0	38
Lane Group Flow (vph)	101	236	0	179	223	0	49	454	68	40	447	22
Conf. Peds. (#/hr)	66		43	43		66	111		339	339		111
Conf. Bikes (#/hr)			4			6			18			1
Turn Type	Perm			pm+pt			Perm		pm+ov	Perm		Perm
Protected Phases		6		5	2			8	5		4	
Permitted Phases	6			2			8	8	4			4
Actuated Green, G (s)	27.6	27.6		37.6	37.6		27.0	27.0	33.5	27.0	27.0	27.0
Effective Green, g (s)	29.0	29.0		39.0	39.0		28.0	28.0	34.0	28.0	28.0	28.0
Actuated g/C Ratio	0.39	0.39		0.52	0.52		0.37	0.37	0.45	0.37	0.37	0.37
Clearance Time (s)	5.4	5.4		3.5	5.4		5.0	5.0	3.5	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	382	602		458	859		258	1182	406	202	1182	466
v/s Ratio Prot		0.15		c0.03	0.13			c0.14	0.01		0.14	
v/s Ratio Perm	0.10			c0.17			0.07		0.07	0.07		0.02
v/c Ratio	0.26	0.39		0.39	0.26		0.19	0.38	0.17	0.20	0.38	0.05
Uniform Delay, d1	15.7	16.6		10.2	10.0		15.9	17.2	12.1	15.9	17.1	15.0
Progression Factor	1.16	1.21		1.00	1.00		1.80	1.83	4.60	1.00	1.00	1.00
Incremental Delay, d2	1.6	1.9		0.6	0.7		1.4	0.8	0.2	2.2	0.9	0.2
Delay (s)	19.9	21.9		10.8	10.7		30.0	32.3	56.0	18.1	18.1	15.2
Level of Service	B	C		B	B		C	C	E	B	B	B
Approach Delay (s)		21.4			10.8			37.6			17.8	
Approach LOS		C			B			D			B	

Intersection Summary			
HCM Average Control Delay	23.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↕			↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	1.00
Frbp, ped/bikes		1.00	1.00		0.95		1.00	0.95			1.00	0.30
Flpb, ped/bikes		0.93	1.00		0.92		0.81	1.00			0.94	1.00
Frt		1.00	0.85		0.98		1.00	0.99			1.00	0.85
Flt Protected		0.99	1.00		0.99		0.95	1.00			0.99	1.00
Satd. Flow (prot)		1525	1417		1426		1290	2960			2952	420
Flt Permitted		0.87	1.00		0.93		0.27	1.00			0.61	1.00
Satd. Flow (perm)		1345	1417		1336		367	2960			1819	420
Volume (vph)	58	137	30	31	121	24	102	600	50	188	551	21
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	62	147	32	33	130	26	110	645	54	202	592	23
RTOR Reduction (vph)	0	0	32	0	1	0	0	3	0	0	0	9
Lane Group Flow (vph)	0	209	0	0	188	0	110	696	0	0	794	14
Confl. Peds. (#/hr)	570		715	715		570	814		795	795		814
Confl. Bikes (#/hr)			9			12			43			28
Turn Type	Perm		NA	Perm			Perm			Perm		Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		2
Actuated Green, G (s)		30.5	0.0		30.5		34.1	34.1			34.1	34.1
Effective Green, g (s)		32.0	0.0		32.0		35.0	35.0			35.0	35.0
Actuated g/C Ratio		0.43	0.00		0.43		0.47	0.47			0.47	0.47
Clearance Time (s)		5.5			5.5		4.9	4.9			4.9	4.9
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		574	0		570		171	1381			849	196
v/s Ratio Prot								0.24				
v/s Ratio Perm		c0.16			0.14		0.30				c0.44	0.03
v/c Ratio		0.36	0.00		0.33		0.64	0.50			1.05dl	0.07
Uniform Delay, d1		14.6	37.5		14.4		15.2	13.9			18.9	11.0
Progression Factor		1.00	1.00		1.00		1.00	1.00			0.94	0.83
Incremental Delay, d2		1.8	0.0		1.6		17.1	1.3			18.1	0.7
Delay (s)		16.4	37.5		15.9		32.4	15.3			35.9	9.9
Level of Service		B	D		B		C	B			D	A
Approach Delay (s)		19.2			15.9			17.6			35.2	
Approach LOS		B			B			B			D	

Intersection Summary

HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕	↗		↕↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor		0.95			0.95			0.95	1.00		0.95	
Frbp, ped/bikes		0.85			0.98			1.00	0.67		0.99	
Flpb, ped/bikes		0.99			0.93			1.00	1.00		1.00	
Frt		0.93			0.99			1.00	0.85		0.99	
Flt Protected		1.00			0.98			1.00	1.00		1.00	
Satd. Flow (prot)		1731			1960			2235	668		2187	
Flt Permitted		0.90			0.64			1.00	1.00		0.93	
Satd. Flow (perm)		1555			1274			2235	668		2044	
Volume (vph)	24	169	188	242	251	33	0	925	284	9	466	20
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	24	172	192	247	256	34	0	944	290	9	476	20
RTOR Reduction (vph)	0	23	0	0	3	0	0	0	101	0	2	0
Lane Group Flow (vph)	0	365	0	0	534	0	0	944	189	0	503	0
Conf. Peds. (#/hr)	138		216	216		138	330		211	211		330
Conf. Bikes (#/hr)			2			2			16			3
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		
Actuated Green, G (s)		68.5			68.5			71.0	71.0			71.0
Effective Green, g (s)		70.0			70.0			72.0	72.0			72.0
Actuated g/C Ratio		0.47			0.47			0.48	0.48			0.48
Clearance Time (s)		5.5			5.5			5.0	5.0			5.0
Vehicle Extension (s)		3.0			3.0			3.0	3.0			3.0
Lane Grp Cap (vph)		726			595			1073	321			981
v/s Ratio Prot								c0.42				
v/s Ratio Perm		0.23			c0.42				0.28			0.25
v/c Ratio		0.50			1.11dl			0.88	0.59			0.51
Uniform Delay, d1		27.9			36.7			35.1	28.2			26.9
Progression Factor		0.75			1.21			1.57	2.87			1.00
Incremental Delay, d2		0.2			11.7			1.1	0.7			1.9
Delay (s)		21.0			56.2			56.0	81.9			28.8
Level of Service		C			E			E	F			C
Approach Delay (s)		21.0			56.2			62.1				28.8
Approach LOS		C			E			E				C

Intersection Summary

HCM Average Control Delay	48.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.5%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑		↔↔	↑↑↑		↔	↑↑↑		↔	↑↑↑	↔
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		0.97	0.86		1.00	0.91		1.00	0.86	0.86
Frbp, ped/bikes	1.00	0.94		1.00	1.00		1.00	0.93		1.00	1.00	0.85
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		0.91	1.00	1.00
Frt	1.00	0.97		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	2168	3695		2168	4009		1098	2878		1021	3035	728
Flt Permitted	0.95	1.00		0.95	1.00		0.22	1.00		0.27	1.00	1.00
Satd. Flow (perm)	2168	3695		2168	4009		252	2878		290	3035	728
Volume (vph)	415	2722	671	222	2500	123	424	642	186	57	551	273
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	437	2865	706	234	2632	129	446	676	196	60	580	287
RTOR Reduction (vph)	0	29	0	0	4	0	0	35	0	0	0	1
Lane Group Flow (vph)	437	3542	0	234	2757	0	446	837	0	60	580	286
Conf. Peds. (#/hr)	222		162	162		22	210		241	241		210
Conf. Bikes (#/hr)			3			2			13			5
Turn Type	Prot			Prot			pm+pt			Perm		pm+ov
Protected Phases	5	2		1	6		3	8			4	5
Permitted Phases							8			4		4
Actuated Green, G (s)	32.6	77.4		13.0	57.8		44.2	44.2		30.2	30.2	62.8
Effective Green, g (s)	32.6	78.9		13.0	59.3		46.1	46.1		32.1	32.1	64.7
Actuated g/C Ratio	0.22	0.53		0.09	0.40		0.31	0.31		0.21	0.21	0.43
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	5.9		5.9	5.9	4.0
Vehicle Extension (s)	2.0	4.0		2.0	4.0		3.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	471	1944		188	1585		134	885		62	649	333
v/s Ratio Prot	0.20	c0.96		0.11	c0.69		c0.22	0.29			0.19	0.19
v/s Ratio Perm							c0.80			0.21		0.21
v/c Ratio	0.93	1.82		1.24	1.74		3.33	0.95		0.97	0.89	0.86
Uniform Delay, d1	57.5	35.5		68.5	45.4		48.2	50.7		58.4	57.3	38.6
Progression Factor	1.33	1.08		0.81	0.72		1.00	1.00		1.03	1.03	1.19
Incremental Delay, d2	3.4	370.0		114.3	332.9		1066.6	18.1		89.5	11.9	15.8
Delay (s)	80.1	408.6		169.9	365.4		1114.8	68.8		150.0	71.0	61.7
Level of Service	F	F		F	F		F	E		F	E	E
Approach Delay (s)		372.7			350.1			422.8			73.3	
Approach LOS		F			F			F			E	

Intersection Summary

HCM Average Control Delay	342.5	HCM Level of Service	F
HCM Volume to Capacity ratio	2.26		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	168.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.97			0.93		1.00	0.95		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1122			1072		1118	2131		1118	2228	
Flt Permitted		0.74			0.75		0.18	1.00		0.15	1.00	
Satd. Flow (perm)		842			824		212	2131		181	2228	
Volume (vph)	104	94	48	182	20	207	42	1233	556	348	938	21
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	107	97	49	188	21	213	43	1271	573	359	967	22
RTOR Reduction (vph)	0	14	0	0	11	0	0	86	0	0	3	0
Lane Group Flow (vph)	0	239	0	0	411	0	43	1758	0	359	986	0
Turn Type		Perm		Perm		Perm		Perm		Perm		Perm
Protected Phases		4		4		4		2		2		2
Permitted Phases		4		4		2		2		2		2
Actuated Green, G (s)		25.0		25.0		25.6	25.6	25.6		25.6	25.6	25.6
Effective Green, g (s)		26.0		26.0		26.0	26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.43		0.43		0.43	0.43	0.43		0.43	0.43	0.43
Clearance Time (s)		5.0		5.0		4.4	4.4	4.4		4.4	4.4	4.4
Vehicle Extension (s)		3.0		3.0		3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		365		357		92	923	923		78	965	965
v/s Ratio Prot							0.82	0.82			0.44	0.44
v/s Ratio Perm		0.28		c0.50		0.20				c1.98		
v/c Ratio		0.65		1.15		0.47	1.90	1.90		4.60	1.02	1.02
Uniform Delay, d1		13.4		17.0		12.1	17.0	17.0		17.0	17.0	17.0
Progression Factor		1.00		1.00		0.29	0.20	0.20		1.00	1.00	1.00
Incremental Delay, d2		4.2		95.1		1.5	407.4	407.4		1650.1	34.6	34.6
Delay (s)		17.6		112.1		5.0	410.8	410.8		1667.1	51.6	51.6
Level of Service		B		F		A	F	F		F	D	D
Approach Delay (s)		17.6		112.1			401.6	401.6			481.9	481.9
Approach LOS		B		F			F	F			F	F

Intersection Summary

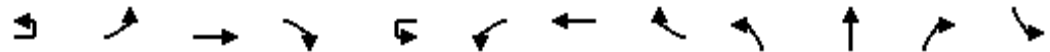
HCM Average Control Delay	373.2	HCM Level of Service	F
HCM Volume to Capacity ratio	2.86		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	172.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.98		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	1122		1118	1154		1118	2221		1118	2210	
Flt Permitted	0.34	1.00		0.34	1.00		0.15	1.00		0.15	1.00	
Satd. Flow (perm)	398	1122		399	1154		174	2221		174	2210	
Volume (vph)	195	304	136	56	385	57	103	1561	69	22	996	82
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	203	317	142	58	401	59	107	1626	72	23	1038	85
RTOR Reduction (vph)	0	27	0	0	4	0	0	6	0	0	10	0
Lane Group Flow (vph)	203	432	0	58	456	0	107	1693	0	23	1113	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		4		4		2		2		2	
Permitted Phases	4		4		2		2		2		2	
Actuated Green, G (s)	23.4	23.4		23.4	23.4		26.5	26.5		26.5	26.5	
Effective Green, g (s)	25.0	25.0		25.0	25.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.45	0.45		0.45	0.45	
Clearance Time (s)	5.6	5.6		5.6	5.6		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	166	468		166	481		78	999		78	995	
v/s Ratio Prot		0.39			0.40			c0.76			0.50	
v/s Ratio Perm	c0.51			0.15			0.61			0.13		
v/c Ratio	1.22	0.92		0.35	0.95		1.37	1.69		0.29	1.12	
Uniform Delay, d1	17.5	16.6		11.9	16.9		16.5	16.5		10.5	16.5	
Progression Factor	0.57	0.51		1.00	1.00		2.31	2.41		0.45	0.56	
Incremental Delay, d2	105.4	3.3		1.3	28.0		186.3	313.5		0.9	54.9	
Delay (s)	115.4	11.7		13.2	44.9		224.5	353.3		5.6	64.1	
Level of Service	F	B		B	D		F	F		A	E	
Approach Delay (s)		43.5			41.3			345.6			62.9	
Approach LOS		D			D			F			E	

Intersection Summary

HCM Average Control Delay	180.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	148.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔↔	↔↔↔	↔		↔↔	↔↔↔	↔	↔	↔↔		↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		0.97	0.91	1.00		0.97	0.91	1.00	1.00	0.95		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		3072	4550	1417		3072	4550	1417	1583	3153		1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (perm)		3072	4550	1417		3072	4550	1417	1583	3153		1583
Volume (vph)	2	127	2541	90	49	156	2165	329	150	1298	39	210
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	2	131	2620	93	51	161	2232	339	155	1338	40	216
RTOR Reduction (vph)	0	0	0	31	0	0	0	79	0	2	0	0
Lane Group Flow (vph)	0	133	2620	62	0	212	2232	260	155	1376	0	216
Turn Type	Prot	Prot	pm+ov		Prot	Prot	pm+ov		Prot			Prot
Protected Phases	1	1	6	3	5	5	2	7	3	8		7
Permitted Phases			6				2					
Actuated Green, G (s)		10.5	32.0	44.0		13.5	35.0	47.0	12.0	42.3		12.0
Effective Green, g (s)		10.5	33.5	45.5		13.5	36.5	48.5	12.0	45.0		12.0
Actuated g/C Ratio		0.09	0.28	0.38		0.11	0.30	0.40	0.10	0.38		0.10
Clearance Time (s)		4.0	5.5	4.0		4.0	5.5	4.0	4.0	6.7		4.0
Vehicle Extension (s)		3.0	5.0	3.0		3.0	5.0	3.0	3.0	4.0		3.0
Lane Grp Cap (vph)		269	1270	585		346	1384	620	158	1182		158
v/s Ratio Prot		0.04	c0.58	0.01		c0.07	c0.49	0.04	0.10	c0.44		c0.14
v/s Ratio Perm				0.03				0.14				
v/c Ratio		0.49	2.06	0.11		0.61	1.61	0.42	0.98	1.16		1.37
Uniform Delay, d1		52.2	43.2	24.1		50.8	41.8	25.7	53.9	37.5		54.0
Progression Factor		0.58	1.29	2.62		0.45	0.89	1.49	1.00	1.00		1.03
Incremental Delay, d2		0.1	478.6	0.0		0.3	276.0	0.0	65.6	83.5		168.9
Delay (s)		30.3	534.4	63.1		23.0	313.1	38.4	119.5	121.0		224.4
Level of Service		C	F	E		C	F	D	F	F		F
Approach Delay (s)			495.4			257.5			120.8			
Approach LOS			F			F			F			

Intersection Summary

HCM Average Control Delay	282.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.46		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	129.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Ideal Flow (vphpl)	1700	1700
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3167	1417
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3167	1417
Volume (vph)	957	95
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	987	98
RTOR Reduction (vph)	0	61
Lane Group Flow (vph)	987	37
Turn Type		Perm
Protected Phases	4	
Permitted Phases		4
Actuated Green, G (s)	42.3	42.3
Effective Green, g (s)	45.0	45.0
Actuated g/C Ratio	0.38	0.38
Clearance Time (s)	6.7	6.7
Vehicle Extension (s)	4.0	4.0
Lane Grp Cap (vph)	1188	531
v/s Ratio Prot	0.31	
v/s Ratio Perm		0.03
v/c Ratio	0.83	0.07
Uniform Delay, d1	34.0	24.1
Progression Factor	0.85	1.39
Incremental Delay, d2	0.5	0.0
Delay (s)	29.6	33.4
Level of Service	C	C
Approach Delay (s)	62.2	
Approach LOS	E	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕		↖	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.86		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4535		1583	5680		1583	3100		1583	3145	
Flt Permitted	0.13	1.00		0.12	1.00		0.19	1.00		0.13	1.00	
Satd. Flow (perm)	223	4535		197	5680		320	3100		215	3145	
Volume (vph)	56	2576	59	112	2393	158	51	1155	187	146	981	47
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	60	2740	63	119	2546	168	54	1229	199	155	1044	50
RTOR Reduction (vph)	0	3	0	0	11	0	0	15	0	0	0	0
Lane Group Flow (vph)	60	2800	0	119	2703	0	54	1413	0	155	1094	0
Turn Type	Perm		pm+pt		Perm		pm+pt		Perm		pm+pt	
Protected Phases	2		1		6		8		7		4	
Permitted Phases	2		6		8		4		8		4	
Actuated Green, G (s)	28.9	28.9		41.4	41.4		25.6	25.6		38.2	38.2	
Effective Green, g (s)	29.9	29.9		42.4	42.4		27.0	27.0		39.6	39.6	
Actuated g/C Ratio	0.33	0.33		0.47	0.47		0.30	0.30		0.44	0.44	
Clearance Time (s)	5.0	5.0		3.5	5.0		5.4	5.4		3.5	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	1507		224	2676		96	930		225	1384	
v/s Ratio Prot		c0.62		0.05	c0.48			c0.46		0.07	c0.35	
v/s Ratio Perm	0.27			0.20			0.17			0.24		
v/c Ratio	0.81	1.86		0.53	1.01		0.56	1.52		0.69	0.79	
Uniform Delay, d1	27.5	30.1		39.9	23.8		26.5	31.5		21.0	21.6	
Progression Factor	0.62	0.68		2.21	1.79		0.82	0.84		1.00	1.00	
Incremental Delay, d2	8.5	386.4		0.2	8.0		12.2	236.8		8.5	4.7	
Delay (s)	25.5	407.0		88.4	50.6		34.0	263.2		29.5	26.3	
Level of Service	C	F		F	D		C	F		C	C	
Approach Delay (s)		399.0			52.2			254.9			26.7	
Approach LOS		F			D			F			C	

Intersection Summary

HCM Average Control Delay	201.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	128.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.99
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	4550	1417	1583	3167	1417	1583	3131	3131
Flt Permitted	0.13	1.00	1.00	0.14	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	223	4550	1417	233	4550	1417	1583	3167	1417	1583	3131	3131
Volume (vph)	228	2018	105	86	1815	249	199	965	81	329	789	65
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	233	2059	107	88	1852	254	203	985	83	336	805	66
RTOR Reduction (vph)	0	0	61	0	0	25	0	0	0	0	7	0
Lane Group Flow (vph)	233	2059	46	88	1852	229	203	985	83	336	864	0
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	Prot		pm+ov		Prot	
Protected Phases	1	6	3	5	2	7	3	8	5	7	4	
Permitted Phases	6		6	2		2			8			
Actuated Green, G (s)	34.5	28.0	36.9	31.9	26.7	33.2	8.9	32.2	37.4	6.5	29.8	
Effective Green, g (s)	35.9	29.9	38.3	33.3	28.6	34.6	8.4	33.4	38.1	6.0	31.0	
Actuated g/C Ratio	0.40	0.33	0.43	0.37	0.32	0.38	0.09	0.37	0.42	0.07	0.34	
Clearance Time (s)	3.5	5.9	3.5	3.5	5.9	3.5	3.5	5.2	3.5	3.5	5.2	
Vehicle Extension (s)	3.0	5.0	3.0	3.0	5.0	3.0	3.0	5.0	3.0	3.0	5.0	
Lane Grp Cap (vph)	180	1512	603	157	1446	608	148	1175	663	106	1078	
v/s Ratio Prot	c0.09	c0.45	0.01	0.03	0.41	0.03	c0.13	c0.31	0.01	c0.21	0.28	
v/s Ratio Perm	0.43		0.03	0.18		0.14			0.05			
v/c Ratio	1.29	1.36	0.08	0.56	1.28	0.38	1.37	0.84	0.13	3.17	0.80	
Uniform Delay, d1	44.2	30.1	15.3	23.5	30.7	19.9	40.8	25.8	15.8	42.0	26.7	
Progression Factor	1.93	0.25	0.07	1.00	1.00	1.00	1.00	1.00	1.00	1.39	0.92	
Incremental Delay, d2	136.3	163.2	0.0	4.5	131.8	0.4	204.0	6.0	0.1	989.7	2.8	
Delay (s)	221.6	170.6	1.1	28.0	162.5	20.3	244.8	31.8	15.9	1048.2	27.2	
Level of Service	F	F	A	C	F	C	F	C	B	F	C	
Approach Delay (s)		168.0			140.6			64.8			311.5	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	165.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	116.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↕		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00		1.00	1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.92		1.00		0.84	1.00	0.97		1.00	1.00	
Flpb, ped/bikes	0.85	1.00		0.90		1.00	0.94	1.00		0.97	1.00	
Frt	1.00	0.91		1.00		0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1352	1390		1432		1196	1487	2979		1529	3143	
Flt Permitted	0.76	1.00		0.61		1.00	0.45	1.00		0.35	1.00	
Satd. Flow (perm)	1077	1390		924		1196	699	2979		570	3143	
Volume (vph)	19	62	90	116	0	89	28	510	152	89	478	12
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	20	66	96	123	0	95	30	543	162	95	509	13
RTOR Reduction (vph)	0	69	0	0	0	68	0	37	0	0	2	0
Lane Group Flow (vph)	20	93	0	123	0	27	30	668	0	95	520	0
Conf. Peds. (#/hr)	130		66	66		130	66		85	85		66
Conf. Bikes (#/hr)			1			1			5			14
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4	2			2		
Actuated Green, G (s)	20.2	20.2		20.2		20.2	45.3	45.3		45.3	45.3	
Effective Green, g (s)	21.0	21.0		21.0		21.0	46.0	46.0		46.0	46.0	
Actuated g/C Ratio	0.28	0.28		0.28		0.28	0.61	0.61		0.61	0.61	
Clearance Time (s)	4.8	4.8		4.8		4.8	4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	302	389		259		335	429	1827		350	1928	
v/s Ratio Prot		0.07						c0.22			0.17	
v/s Ratio Perm	0.02			c0.13		0.02	0.04			0.17		
v/c Ratio	0.07	0.24		0.47		0.08	0.07	0.37		0.27	0.27	
Uniform Delay, d1	19.8	20.8		22.4		19.9	5.9	7.2		6.7	6.7	
Progression Factor	1.00	1.00		0.93		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	1.4		6.0		0.5	0.3	0.6		1.9	0.3	
Delay (s)	20.2	22.3		26.8		20.3	6.2	7.8		8.6	7.1	
Level of Service	C	C		C		C	A	A		A	A	
Approach Delay (s)		22.1			24.0			7.7			7.3	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↘		↗	↕	↘	↗	↕	↘
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)				4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor				1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes				1.00	0.89		1.00	1.00	0.81	1.00	1.00	
Flpb, ped/bikes				1.00	1.00		0.98	1.00	1.00	0.97	1.00	
Frt				1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected				0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1118	895		1098	2235	807	1084	2234	
Flt Permitted				0.95	1.00		0.44	1.00	1.00	0.21	1.00	
Satd. Flow (perm)				1118	895		511	2235	807	236	2234	
Volume (vph)	0	0	0	126	4	133	3	1048	166	227	508	2
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	130	4	137	3	1080	171	234	524	2
RTOR Reduction (vph)	0	0	0	0	97	0	0	0	68	0	0	0
Lane Group Flow (vph)	0	0	0	130	44	0	3	1080	103	234	526	0
Confl. Peds. (#/hr)	55						55	20		161	161	20
Confl. Bikes (#/hr)							1			14		
Turn Type	Split		Perm			Perm		Perm custom				
Protected Phases	3	3			4			6				
Permitted Phases				4			6		6	2	2	
Actuated Green, G (s)				21.0	21.0		44.4	44.4	44.4	44.4	44.4	
Effective Green, g (s)				22.0	22.0		45.0	45.0	45.0	45.0	45.0	
Actuated g/C Ratio				0.29	0.29		0.60	0.60	0.60	0.60	0.60	
Clearance Time (s)				5.0	5.0		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)				3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)				328	263		307	1341	484	142	1340	
v/s Ratio Prot					0.05			0.48				
v/s Ratio Perm				c0.12			0.01		0.13	c0.99	0.24	
v/c Ratio				0.40	0.17		0.01	0.81	0.21	1.65	0.39	
Uniform Delay, d1				21.2	19.7		6.0	11.6	6.9	15.0	7.8	
Progression Factor				1.49	4.23		0.92	0.87	1.04	1.00	1.00	
Incremental Delay, d2				0.4	0.1		0.0	0.5	0.1	320.8	0.9	
Delay (s)				31.9	83.4		5.6	10.6	7.3	335.8	8.7	
Level of Service				C	F		A	B	A	F	A	
Approach Delay (s)		0.0			58.7			10.1			109.4	
Approach LOS		A			E			B			F	
Intersection Summary												
HCM Average Control Delay			48.9									HCM Level of Service D
HCM Volume to Capacity ratio			1.24									
Actuated Cycle Length (s)			75.0									Sum of lost time (s) 8.0
Intersection Capacity Utilization			93.3%									ICU Level of Service F
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		1.00	0.86		1.00	0.95	1.00	1.00	1.00	0.88
Frbp, ped/bikes	1.00	0.98		1.00	0.95		1.00	1.00	0.68	1.00	1.00	0.85
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.95	1.00	1.00	0.87	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3926		1118	3769		1058	2235	685	969	1176	1495
Flt Permitted	0.95	1.00		0.06	1.00		0.37	1.00	1.00	0.39	1.00	1.00
Satd. Flow (perm)	2168	3926		71	3769		416	2235	685	400	1176	1495
Volume (vph)	352	3714	183	43	2664	461	66	509	72	132	189	307
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	374	3951	195	46	2834	490	70	541	77	140	201	327
RTOR Reduction (vph)	0	5	0	0	20	0	0	0	0	0	0	0
Lane Group Flow (vph)	374	4141	0	46	3304	0	70	541	77	140	201	327
Conf. Peds. (#/hr)	220		166	166		220	183		216	216		183
Conf. Bikes (#/hr)			8			7			18			3
Turn Type	Prot			Perm			pm+pt		Perm	Perm		pm+ov
Protected Phases	1	6			2		3	8			4	1
Permitted Phases				2			8		8	4		4
Actuated Green, G (s)	28.1	97.0		64.9	64.9		42.2	42.2	42.2	30.4	30.4	58.5
Effective Green, g (s)	28.1	98.0		65.9	65.9		44.0	44.0	44.0	32.2	32.2	60.3
Actuated g/C Ratio	0.19	0.65		0.44	0.44		0.29	0.29	0.29	0.21	0.21	0.40
Clearance Time (s)	4.0	5.0		5.0	5.0		4.0	5.8	5.8	5.8	5.8	4.0
Vehicle Extension (s)	2.0	4.0		4.0	4.0		2.0	3.0	3.0	3.0	3.0	2.0
Lane Grp Cap (vph)	406	2565		31	1656		155	656	201	86	252	641
v/s Ratio Prot	0.17	c1.05			c0.88		0.02	c0.24			0.17	0.10
v/s Ratio Perm				0.64			0.11		0.11	c0.35		0.12
v/c Ratio	0.92	1.61		1.48	2.00		0.45	0.82	0.38	1.63	0.80	0.51
Uniform Delay, d1	59.9	26.0		42.0	42.0		40.9	49.4	42.2	58.9	55.8	33.7
Progression Factor	0.99	1.08		0.45	0.46		1.00	1.00	1.00	1.01	1.01	1.15
Incremental Delay, d2	3.6	276.7		232.7	448.1		0.8	8.3	1.2	326.3	15.0	0.3
Delay (s)	63.1	304.9		251.6	467.4		41.7	57.7	43.4	385.8	71.3	38.9
Level of Service	E	F		F	F		D	E	D	F	E	D
Approach Delay (s)		284.9			464.4			54.5			121.3	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM Average Control Delay	321.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.79		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	149.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓		↔	↑↑		↔		↔		↑↓	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0			
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00			
Frt		0.99		1.00	1.00		1.00		0.85			
Flt Protected		1.00		0.95	1.00		0.95		1.00			
Satd. Flow (prot)		3125		1583	3167		1583		1417			
Flt Permitted		1.00		0.06	1.00		0.76		1.00			
Satd. Flow (perm)		3125		107	3167		1262		1417			
Volume (vph)	0	2002	193	945	1408	0	71	0	697	0	0	0
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	2064	199	974	1452	0	73	0	719	0	0	0
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	184	0	0	0
Lane Group Flow (vph)	0	2257	0	974	1452	0	73	0	535	0	0	0
Turn Type				pm+pt		custom		Over	Perm			
Protected Phases		2		1	6			1			4	
Permitted Phases				6			8			4		
Actuated Green, G (s)		57.2		100.2	100.2		10.8		39.0			
Effective Green, g (s)		58.2		101.2	101.2		10.8		39.0			
Actuated g/C Ratio		0.49		0.84	0.84		0.09		0.32			
Clearance Time (s)		5.0		4.0	5.0		4.0		4.0			
Vehicle Extension (s)		4.0		3.0	3.0		3.0		3.0			
Lane Grp Cap (vph)		1516		570	2671		114		461			
v/s Ratio Prot		0.72		c0.56	0.46				0.38			
v/s Ratio Perm				c0.88			c0.06					
v/c Ratio		1.49		1.71	0.54		0.64		1.16			
Uniform Delay, d1		30.9		42.7	2.7		52.7		40.5			
Progression Factor		1.00		1.19	0.59		1.00		1.00			
Incremental Delay, d2		223.5		325.0	0.6		11.6		94.3			
Delay (s)		254.4		376.0	2.3		64.4		134.8			
Level of Service		F		F	A		E		F			
Approach Delay (s)		254.4			152.3			128.3			0.0	
Approach LOS		F			F			F			A	

Intersection Summary

HCM Average Control Delay	191.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	141.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑		↔↔	↑↑↑		↔	↑↑	↔	↔	↑↑	↔↔
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		0.97	0.86		1.00	0.95	1.00	1.00	0.95	0.88
Frbp, ped/bikes	1.00	0.97		1.00	1.00		1.00	1.00	0.95	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3872		2168	3974		1107	2235	955	1106	2235	1667
Flt Permitted	0.95	1.00		0.95	1.00		0.29	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)	2168	3872		2168	3974		343	2235	955	317	2235	1667
Volume (vph)	918	4202	433	16	2854	307	255	562	132	498	358	329
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	998	4567	471	17	3102	334	277	611	143	541	389	358
RTOR Reduction (vph)	0	11	0	0	12	0	0	0	0	0	0	2
Lane Group Flow (vph)	998	5027	0	17	3424	0	277	611	143	541	389	356
Conf. Peds. (#/hr)	13		107	107		13	53		19	19		53
Conf. Bikes (#/hr)			16			5			13			18
Turn Type	Prot			Prot		pm+pt		pm+ov	Perm		pm+ov	
Protected Phases	5	2		1	6	3	8	1		4	4	5
Permitted Phases						8		8	4			4
Actuated Green, G (s)	30.0	91.5		5.0	66.5	37.1	37.1	42.1	28.1	28.1	58.1	
Effective Green, g (s)	30.0	93.0		5.0	68.0	40.0	40.0	45.0	31.0	31.0	61.0	
Actuated g/C Ratio	0.20	0.62		0.03	0.45	0.27	0.27	0.30	0.21	0.21	0.41	
Clearance Time (s)	4.0	5.5		4.0	5.5	4.0	6.9	4.0	6.9	6.9	4.0	
Vehicle Extension (s)	1.0	4.0		1.0	4.0	3.0	2.0	1.0	2.0	2.0	1.0	
Lane Grp Cap (vph)	434	2401		72	1802	117	596	312	66	462	678	
v/s Ratio Prot	c0.46	c1.30		0.01	c0.86	c0.08	0.27	0.02		0.17	0.10	
v/s Ratio Perm						0.55		0.13	c1.71		0.11	
v/c Ratio	2.30	2.09		0.24	1.90	2.37	1.03	0.46	8.20	0.84	0.52	
Uniform Delay, d1	60.0	28.5		70.6	41.0	56.4	55.0	42.6	59.5	57.1	33.6	
Progression Factor	0.72	0.41		1.25	0.66	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	585.5	492.2		0.1	405.2	641.0	43.4	0.4	3269.4	12.6	0.3	
Delay (s)	628.9	504.0		88.7	432.4	697.4	98.4	43.0	3328.9	69.7	33.9	
Level of Service	F	F		F	F	F	F	D	F	E	C	
Approach Delay (s)		524.6			430.7		251.7			1428.7		
Approach LOS		F			F		F			F		

Intersection Summary

HCM Average Control Delay	572.0	HCM Level of Service	F
HCM Volume to Capacity ratio	3.67		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	196.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖↖	↑↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.86		0.97	0.81		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.93		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	4025		2168	4738		1118	2090		1118	2179	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1118	4025		2168	4738		1118	2090		1118	2179	
Volume (vph)	51	3657	138	171	3148	122	103	551	422	385	1064	213
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	52	3732	141	174	3212	124	105	562	431	393	1086	217
RTOR Reduction (vph)	0	3	0	0	4	0	0	92	0	0	0	0
Lane Group Flow (vph)	52	3870	0	174	3332	0	105	901	0	393	1303	0
Turn Type	Prot		Prot		Prot		Prot		Prot			
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	8.5	68.3		15.8	75.6		15.6	33.0		13.4	30.8	
Effective Green, g (s)	8.5	69.8		15.8	77.1		15.6	35.0		13.4	32.8	
Actuated g/C Ratio	0.06	0.47		0.11	0.51		0.10	0.23		0.09	0.22	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	1.0	4.0		1.0	4.0		1.0	4.0		1.0	4.0	
Lane Grp Cap (vph)	63	1873		228	2435		116	488		100	476	
v/s Ratio Prot	0.05	c0.96		0.08	c0.70		0.09	c0.43		c0.35	c0.60	
v/s Ratio Perm												
v/c Ratio	0.83	2.07		0.76	1.37		0.91	1.85		3.93	2.74	
Uniform Delay, d1	70.0	40.1		65.3	36.5		66.5	57.5		68.3	58.6	
Progression Factor	1.03	1.15		0.60	0.32		1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.5	479.9		1.3	166.0		53.8	388.7		1342.2	787.7	
Delay (s)	79.4	526.0		40.5	177.8		120.2	446.2		1410.5	846.3	
Level of Service	E	F		D	F		F	F		F	F	
Approach Delay (s)		520.1			171.0			415.0			977.1	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	464.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.24		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	187.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 98: Olympic Blvd & Sepulveda Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗	↗	↗	↗↗	↗	↗	↗↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	4524		1583	4550	1417	1583	3167	1417	1583	3129	
Flt Permitted	0.11	1.00		0.95	1.00	1.00	0.11	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	190	4524		1583	4550	1417	189	3167	1417	189	3129	
Volume (vph)	55	2353	93	97	2385	138	203	1158	173	47	1036	90
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	57	2451	97	101	2484	144	211	1206	180	49	1079	94
RTOR Reduction (vph)	0	4	0	0	0	9	0	0	57	0	1	0
Lane Group Flow (vph)	57	2544	0	101	2484	135	211	1206	123	49	1172	0
Turn Type	Perm			Prot		Perm	Perm		Perm	Perm		
Protected Phases	8			7	4			6			2	
Permitted Phases	8					4	6		6		2	
Actuated Green, G (s)	34.0	34.0		8.2	45.7	45.7	34.3	34.3	34.3	34.3	34.3	
Effective Green, g (s)	35.0	35.0		7.7	46.7	46.7	35.3	35.3	35.3	35.3	35.3	
Actuated g/C Ratio	0.39	0.39		0.09	0.52	0.52	0.39	0.39	0.39	0.39	0.39	
Clearance Time (s)	5.0	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	74	1759		135	2361	735	74	1242	556	74	1227	
v/s Ratio Prot	c0.56			0.06	c0.55			0.38			0.37	
v/s Ratio Perm	0.30					0.10	c1.12		0.09	0.26		
v/c Ratio	0.77	1.45		0.75	1.05	0.18	2.85	0.97	0.22	0.66	0.96	
Uniform Delay, d1	24.0	27.5		40.2	21.6	11.5	27.4	26.8	18.2	22.5	26.6	
Progression Factor	0.92	0.84		0.89	1.69	2.13	0.59	0.57	0.29	1.00	1.00	
Incremental Delay, d2	38.1	202.9		6.4	27.3	0.2	836.5	3.5	0.1	38.1	17.0	
Delay (s)	60.0	225.9		42.1	63.9	24.7	852.6	18.7	5.3	60.6	43.6	
Level of Service	E	F		D	E	C	F	B	A	E	D	
Approach Delay (s)	222.3			61.0			127.4			44.3		
Approach LOS	F			E			F			D		

Intersection Summary

HCM Average Control Delay	123.0	HCM Level of Service	F
HCM Volume to Capacity ratio	2.06		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	120.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑↑		↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	4514		1583	3120		1583	3167	1417
Flt Permitted	0.14	1.00	1.00	0.12	1.00		0.95	1.00		0.14	1.00	1.00
Satd. Flow (perm)	228	4550	1417	201	4514		1583	3120		231	3167	1417
Volume (vph)	69	2131	97	102	1611	89	181	1530	167	69	1071	108
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	70	2174	99	104	1644	91	185	1561	170	70	1093	110
RTOR Reduction (vph)	0	0	32	0	6	0	0	9	0	0	0	43
Lane Group Flow (vph)	70	2174	67	104	1729	0	185	1722	0	70	1093	67
Turn Type	Perm		pm+ov	pm+pt			Prot			Perm		Perm
Protected Phases		6	3	5	2		3	8		4		4
Permitted Phases	6		6	2						4		4
Actuated Green, G (s)	27.7	27.7	40.4	35.5	35.5		12.7	44.5		28.3	28.3	28.3
Effective Green, g (s)	29.2	29.2	41.4	37.0	37.0		12.2	45.0		28.8	28.8	28.8
Actuated g/C Ratio	0.32	0.32	0.46	0.41	0.41		0.14	0.50		0.32	0.32	0.32
Clearance Time (s)	5.5	5.5	3.5	3.0	5.5		3.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	2.0	3.0	3.0		2.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	1476	715	141	1856		215	1560		74	1013	453
v/s Ratio Prot		c0.48	0.01	0.03	c0.38		0.12	c0.55			0.35	
v/s Ratio Perm	0.31		0.03	0.27						0.30		0.05
v/c Ratio	0.95	1.47	0.09	0.74	0.93		0.86	1.10		0.95	1.08	0.15
Uniform Delay, d1	29.6	30.4	13.7	22.8	25.3		38.1	22.5		29.8	30.6	21.8
Progression Factor	1.00	1.00	1.00	2.07	1.50		1.00	1.00		0.67	0.69	0.56
Incremental Delay, d2	90.3	216.5	0.0	1.9	1.1		27.0	56.8		46.6	42.1	0.2
Delay (s)	119.9	246.9	13.7	49.0	39.1		65.1	79.3		66.6	63.1	12.4
Level of Service	F	F	B	D	D		E	E		E	E	B
Approach Delay (s)		233.3			39.7			77.9			58.9	
Approach LOS		F			D			E			E	

Intersection Summary

HCM Average Control Delay	114.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	127.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↘		↘	↗↘	↗	↘	↗↘	↗	↗↘	↗↘	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	0.86	0.86	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (prot)	1304	3732		1304	3747	1141	1304	2608	1144	2243	2264	
Flt Permitted	0.07	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (perm)	96	3732		1304	3747	1141	1304	2608	1144	2243	2264	
Volume (vph)	32	1796	39	88	1745	1230	140	171	186	1436	234	28
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	34	1911	41	94	1856	1309	149	182	198	1528	249	30
RTOR Reduction (vph)	0	1	0	0	0	453	0	0	0	0	2	0
Lane Group Flow (vph)	34	1951	0	94	1856	856	149	182	198	1019	786	0
Conf. Peds. (#/hr)	5		9	9		5	56		6	6		56
Conf. Bikes (#/hr)			4			5			8			8
Turn Type	Perm		Prot		Perm	Split	pm+ov		Split			
Protected Phases	6		5		2	3	3	5	4		4	
Permitted Phases	6					2	3					
Actuated Green, G (s)	56.0	56.0	10.0		70.0	70.0	15.0	15.0	25.0	50.0	50.0	
Effective Green, g (s)	57.0	57.0	10.0		71.0	71.0	16.0	16.0	26.0	51.0	51.0	
Actuated g/C Ratio	0.38	0.38	0.07		0.47	0.47	0.11	0.11	0.17	0.34	0.34	
Clearance Time (s)	5.0	5.0	4.0		5.0	5.0	5.0	5.0	4.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0	2.0		4.0	4.0	2.0	2.0	2.0	4.0	4.0	
Lane Grp Cap (vph)	36	1418	87		1774	540	139	278	198	763	770	
v/s Ratio Prot		0.52	0.07		0.50		c0.11	0.07	0.07	c0.45	0.35	
v/s Ratio Perm	0.35					c0.75		0.11				
v/c Ratio	0.94	1.38	1.08		1.05	1.58	1.07	0.65	1.00	1.34	1.25dl	
Uniform Delay, d1	45.0	46.5	70.0		39.5	39.5	67.0	64.3	62.0	49.5	49.5	
Progression Factor	1.41	1.40	1.11		1.05	5.54	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	106.9	172.1	53.2		22.7	263.8	96.9	4.2	64.0	159.9	37.8	
Delay (s)	170.1	237.3	130.6		64.3	482.7	163.9	68.5	126.0	209.4	87.3	
Level of Service	F	F	F		E	F	F	E	F	F	F	
Approach Delay (s)		236.1			234.3			116.9			156.1	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	207.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	141.6%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑	↖		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	0.99		1.00	1.00	0.85		1.00			1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.99	
Satd. Flow (prot)	1583	4501		1583	3167	1417		1639			3119	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.43			0.55	
Satd. Flow (perm)	1583	4501		1583	3167	1417		717			1740	
Volume (vph)	148	1097	85	32	1105	127	163	445	19	143	419	11
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	164	1219	94	36	1228	141	181	494	21	159	466	12
RTOR Reduction (vph)	0	8	0	0	0	77	0	1	0	0	1	0
Lane Group Flow (vph)	164	1305	0	36	1228	64	0	695	0	0	636	0
Turn Type	Prot			Prot		Perm	Prot				Prot	
Protected Phases	1	6		5	2		3	8			7	4
Permitted Phases						2						
Actuated Green, G (s)	9.6	46.6		3.6	40.6	40.6		27.5			27.5	
Effective Green, g (s)	9.6	46.9		3.6	40.9	40.9		27.5			27.5	
Actuated g/C Ratio	0.11	0.52		0.04	0.45	0.45		0.31			0.31	
Clearance Time (s)	4.0	4.3		4.0	4.3	4.3		4.0			4.0	
Vehicle Extension (s)	3.0	5.7		3.0	5.5	5.5		3.0			3.0	
Lane Grp Cap (vph)	169	2346		63	1439	644		219			532	
v/s Ratio Prot	c0.10	0.29		0.02	c0.39							
v/s Ratio Perm						0.05		c0.97			0.37	
v/c Ratio	0.97	0.56		0.57	0.85	0.10		3.17			79.50dl	
Uniform Delay, d1	40.1	14.5		42.4	21.9	14.0		31.2			31.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	60.2	1.0		11.9	6.6	0.3		990.6			105.0	
Delay (s)	100.3	15.5		54.4	28.5	14.3		1021.8			136.2	
Level of Service	F	B		D	C	B		F			F	
Approach Delay (s)		24.9			27.7			1021.8			136.2	
Approach LOS		C			C			F			F	

Intersection Summary

HCM Average Control Delay	207.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	112.2%	ICU Level of Service	H
Analysis Period (min)	15		
dl	Defacto Left Lane. Recode with 1 though lane as a left lane.		
dr	Defacto Right Lane. Recode with 1 though lane as a right lane.		
c	Critical Lane Group		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑	↗	↗	↑↑	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.91	1.00	0.96	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.97	1.00	1.00	0.96	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	3725		1304	3687		1267	2608	1062	1256	2415	
Flt Permitted	0.06	1.00		0.10	1.00		0.21	1.00	1.00	0.40	1.00	
Satd. Flow (perm)	82	3725		136	3687		286	2608	1062	532	2415	
Volume (vph)	226	1566	37	49	1834	86	110	371	163	178	450	159
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	240	1666	39	52	1951	91	117	395	173	189	479	169
RTOR Reduction (vph)	0	2	0	0	3	0	0	0	20	0	10	0
Lane Group Flow (vph)	240	1703	0	52	2039	0	117	395	153	189	638	0
Conf. Peds. (#/hr)	67		48	48		67	40		47	47		40
Conf. Bikes (#/hr)			7			2			2			5
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		6			2			8				4
Permitted Phases	6			2			8		8		4	
Actuated Green, G (s)	97.5	97.5		97.5	97.5		44.0	44.0	44.0	44.0	44.0	
Effective Green, g (s)	98.0	98.0		98.0	98.0		44.0	44.0	44.0	44.0	44.0	
Actuated g/C Ratio	0.65	0.65		0.65	0.65		0.29	0.29	0.29	0.29	0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	54	2434		89	2409		84	765	312	156	708	
v/s Ratio Prot		0.46			0.55			0.15			0.26	
v/s Ratio Perm	c2.91			0.38			c0.41		0.14	0.35		
v/c Ratio	4.44	0.70		0.58	0.85		1.39	0.52	0.49	1.21	0.90	
Uniform Delay, d1	26.0	16.6		14.6	20.2		53.0	44.1	43.8	53.0	50.9	
Progression Factor	1.00	1.00		1.57	1.70		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1591.9	1.7		2.5	0.4		234.1	2.5	5.4	140.1	16.8	
Delay (s)	1617.9	18.3		25.4	34.7		287.1	46.6	49.2	193.1	67.7	
Level of Service	F	B		C	C		F	D	D	F	E	
Approach Delay (s)		215.7			34.5			88.4			96.1	
Approach LOS		F			C			F			F	

Intersection Summary

HCM Average Control Delay	113.8	HCM Level of Service	F
HCM Volume to Capacity ratio	3.52		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	117.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.95			0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1573			1617		1583	1647		1583	1667	1417
Flt Permitted		0.94			0.90		0.44	1.00		0.36	1.00	1.00
Satd. Flow (perm)		1482			1466		737	1647		606	1667	1417
Volume (vph)	36	124	93	33	135	32	181	499	42	43	434	48
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	135	101	36	147	35	197	542	46	47	472	52
RTOR Reduction (vph)	0	40	0	0	13	0	0	4	0	0	0	19
Lane Group Flow (vph)	0	235	0	0	205	0	197	584	0	47	472	33
Turn Type		Perm		Perm		Perm		Perm		Perm		Perm
Protected Phases		8		4		4		2		6		6
Permitted Phases		8		4		2		6		6		6
Actuated Green, G (s)		13.7		13.7		37.5		37.5		37.5		37.5
Effective Green, g (s)		14.2		14.2		37.8		37.8		37.8		37.8
Actuated g/C Ratio		0.24		0.24		0.63		0.63		0.63		0.63
Clearance Time (s)		4.5		4.5		4.3		4.3		4.3		4.3
Vehicle Extension (s)		3.0		3.0		3.0		3.0		3.0		3.0
Lane Grp Cap (vph)		351		347		464		1038		382		893
v/s Ratio Prot								c0.35				0.28
v/s Ratio Perm		c0.16		0.14		0.27				0.08		0.02
v/c Ratio		0.67		0.59		0.42		0.56		0.12		0.04
Uniform Delay, d1		20.8		20.3		5.6		6.4		4.5		5.7
Progression Factor		1.00		1.00		0.42		0.41		1.00		1.00
Incremental Delay, d2		5.0		2.7		0.7		0.6		0.7		1.4
Delay (s)		25.7		23.0		3.1		3.2		5.1		7.1
Level of Service		C		C		A		A		A		A
Approach Delay (s)		25.7		23.0		3.2				6.7		
Approach LOS		C		C		A				A		

Intersection Summary

HCM Average Control Delay	10.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶		↶	↶	↶	↶	↶	↶
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	3714		1304	3711		1304	1373	1167	1304	1356	
Flt Permitted	0.17	1.00		0.17	1.00		0.31	1.00	1.00	0.25	1.00	
Satd. Flow (perm)	239	3714		239	3711		426	1373	1167	341	1356	
Volume (vph)	37	1414	88	86	1795	124	109	594	112	47	480	43
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	39	1473	92	90	1870	129	114	619	117	49	500	45
RTOR Reduction (vph)	0	12	0	0	13	0	0	0	3	0	1	0
Lane Group Flow (vph)	39	1553	0	90	1986	0	114	619	114	49	544	0
Turn Type	Perm			Perm			Perm			Perm	Perm	
Protected Phases	2			2			4			4	4	
Permitted Phases	2			2			4			4	4	
Actuated Green, G (s)	22.4	22.4		22.4	22.4		28.0	28.0	28.0	28.0	28.0	
Effective Green, g (s)	23.0	23.0		23.0	23.0		29.0	29.0	29.0	29.0	29.0	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.48	0.48	0.48	0.48	0.48	
Clearance Time (s)	4.6	4.6		4.6	4.6		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)	92	1424		92	1423		206	664	564	165	655	
v/s Ratio Prot		0.42			c0.54			c0.45			0.40	
v/s Ratio Perm	0.16			0.38			0.27		0.10	0.14		
v/c Ratio	0.42	1.09		0.98	1.40		0.55	0.93	0.20	0.30	0.83	
Uniform Delay, d1	13.6	18.5		18.3	18.5		10.9	14.6	8.9	9.4	13.4	
Progression Factor	1.00	1.00		1.56	1.63		1.00	1.00	1.00	0.68	0.72	
Incremental Delay, d2	13.7	52.6		74.2	181.2		10.3	21.8	0.8	4.0	10.5	
Delay (s)	27.3	71.1		102.7	211.3		21.2	36.3	9.7	10.3	20.1	
Level of Service	C	E		F	F		C	D	A	B	C	
Approach Delay (s)		70.1			206.6			30.6			19.2	
Approach LOS		E			F			C			B	

Intersection Summary

HCM Average Control Delay	113.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	136.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑	↗	↘	↑↑		↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.86	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4470		1583	5733	1417	1583	3055		1583	3167	1417
Flt Permitted	0.10	1.00		0.12	1.00	1.00	0.32	1.00		0.12	1.00	1.00
Satd. Flow (perm)	167	4470		202	5733	1417	541	3055		208	3167	1417
Volume (vph)	22	1158	154	146	1861	271	387	948	291	377	572	68
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	22	1182	157	149	1899	277	395	967	297	385	584	69
RTOR Reduction (vph)	0	19	0	0	0	13	0	17	0	0	0	7
Lane Group Flow (vph)	22	1320	0	149	1899	264	395	1247	0	385	584	62
Turn Type	Perm			Perm		pm+ov	pm+pt			pm+pt		Perm
Protected Phases	6			2		7	3	8		7		4
Permitted Phases	6			2		2	8			4		4
Actuated Green, G (s)	39.0	39.0		39.0	39.0	45.0	36.1	30.1		36.1	30.1	30.1
Effective Green, g (s)	40.0	40.0		40.0	40.0	46.0	38.0	32.0		38.0	32.0	32.0
Actuated g/C Ratio	0.44	0.44		0.44	0.44	0.51	0.42	0.36		0.42	0.36	0.36
Clearance Time (s)	5.0	5.0		5.0	5.0	4.0	4.0	5.9		4.0	5.9	5.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	1987		90	2548	787	298	1086		179	1126	504
v/s Ratio Prot		0.30			0.33	0.02	0.09	0.41		c0.14	0.18	
v/s Ratio Perm	0.13			c0.74		0.16	0.47			c0.76		0.04
v/c Ratio	0.30	0.66		1.66	0.75	0.34	1.33	1.15		2.15	0.52	0.12
Uniform Delay, d1	16.0	19.7		25.0	20.8	13.0	24.8	29.0		23.9	22.9	19.5
Progression Factor	1.00	1.00		1.25	1.26	1.83	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	10.0	1.8		299.5	0.2	0.0	167.9	77.6		536.0	1.7	0.5
Delay (s)	26.0	21.5		330.6	26.4	23.8	192.8	106.6		560.0	24.6	20.0
Level of Service	C	C		F	C	C	F	F		F	C	C
Approach Delay (s)		21.6			45.6			127.1			222.9	
Approach LOS		C			D			F			F	

Intersection Summary

HCM Average Control Delay	90.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	0.99		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3708		1304	3747	1259	
Flt Permitted	1.00		0.07	1.00	0.97	
Satd. Flow (perm)	3708		100	3747	1259	
Volume (vph)	1703	129	43	1913	187	133
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1774	134	45	1993	195	139
RTOR Reduction (vph)	8	0	0	0	10	0
Lane Group Flow (vph)	1900	0	45	1993	324	0
Turn Type			Perm			
Protected Phases	6			2	4	
Permitted Phases			2			
Actuated Green, G (s)	55.0		55.0	55.0	26.2	
Effective Green, g (s)	55.1		55.1	55.1	26.9	
Actuated g/C Ratio	0.61		0.61	0.61	0.30	
Clearance Time (s)	4.1		4.1	4.1	4.7	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2270		61	2294	376	
v/s Ratio Prot	0.51			c0.53	c0.26	
v/s Ratio Perm			0.45			
v/c Ratio	0.84		0.74	0.87	0.86	
Uniform Delay, d1	13.9		12.3	14.5	29.8	
Progression Factor	0.45		1.00	1.00	1.00	
Incremental Delay, d2	3.2		56.2	4.8	18.0	
Delay (s)	9.4		68.6	19.3	47.8	
Level of Service	A		E	B	D	
Approach Delay (s)	9.4			20.3	47.8	
Approach LOS	A			C	D	
Intersection Summary						
HCM Average Control Delay			17.6		HCM Level of Service	B
HCM Volume to Capacity ratio			0.87			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			81.9%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.98			1.00	0.96
Flpb, ped/bikes	1.00	1.00		0.99	1.00			0.99			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.91			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.98	1.00
Satd. Flow (prot)	1300	3738		1295	3740			1201			1339	1123
Flt Permitted	0.07	1.00		0.11	1.00			0.92			0.93	1.00
Satd. Flow (perm)	98	3738		152	3740			1120			1270	1123
Volume (vph)	6	1627	14	33	1944	16	39	10	90	2	3	4
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	6	1695	15	34	2025	17	41	10	94	2	3	4
RTOR Reduction (vph)	0	1	0	0	1	0	0	14	0	0	0	3
Lane Group Flow (vph)	6	1709	0	34	2041	0	0	131	0	0	5	1
Conf. Peds. (#/hr)	30		38	38		30	24		15	15		24
Conf. Bikes (#/hr)			2			4			2			
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	65.3	65.3		65.3	65.3			16.7			16.7	16.7
Effective Green, g (s)	65.3	65.3		65.3	65.3			16.7			16.7	16.7
Actuated g/C Ratio	0.73	0.73		0.73	0.73			0.19			0.19	0.19
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	71	2712		110	2714			208			236	208
v/s Ratio Prot		0.46			c0.55							
v/s Ratio Perm	0.06			0.22				c0.12			0.00	0.00
v/c Ratio	0.08	0.63		0.31	0.75			0.63			0.02	0.00
Uniform Delay, d1	3.6	6.2		4.4	7.5			33.8			30.0	29.9
Progression Factor	2.64	3.01		0.83	0.76			1.00			1.00	1.00
Incremental Delay, d2	0.2	0.1		3.4	0.9			6.1			0.0	0.0
Delay (s)	9.8	18.9		7.0	6.6			39.9			30.0	29.9
Level of Service	A	B		A	A			D			C	C
Approach Delay (s)		18.9			6.6			39.9			29.9	
Approach LOS		B			A			D			C	

Intersection Summary

HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↙	↑↑	↙↘	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (prot)	3167	1417	1583	3167	3031	
Flt Permitted	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (perm)	3167	1417	1583	3167	3031	
Volume (vph)	1419	774	94	1491	430	78
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	1526	832	101	1603	462	84
RTOR Reduction (vph)	0	75	0	0	17	0
Lane Group Flow (vph)	1526	757	101	1603	529	0
Turn Type		pt+ov	Prot			
Protected Phases	2	2 4	1	6	4	
Permitted Phases						
Actuated Green, G (s)	41.1	73.9	9.0	37.6	28.9	
Effective Green, g (s)	41.0	73.5	8.5	37.5	28.5	
Actuated g/C Ratio	0.46	0.82	0.09	0.42	0.32	
Clearance Time (s)	3.9		3.5	3.9	3.6	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1443	1157	150	1320	960	
v/s Ratio Prot	c0.48	c0.53	c0.06	c0.51	0.17	
v/s Ratio Perm						
v/c Ratio	1.06	0.65	0.67	1.21	0.55	
Uniform Delay, d1	24.5	3.2	39.4	26.2	25.5	
Progression Factor	0.73	0.94	1.00	1.00	1.00	
Incremental Delay, d2	36.1	0.8	11.3	103.7	0.7	
Delay (s)	54.1	3.9	50.7	129.9	26.1	
Level of Service	D	A	D	F	C	
Approach Delay (s)	36.4			125.2	26.1	
Approach LOS	D			F	C	

Intersection Summary

HCM Average Control Delay	68.0	HCM Level of Service	E
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑		↙	↑↑↑		↙	↑↑		↙	↑↑	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	3706		1304	3681		1304	2547		1302	2442	
Flt Permitted	0.14	1.00		0.14	1.00		0.13	1.00		0.18	1.00	
Satd. Flow (perm)	188	3706		188	3681		178	2547		242	2442	
Volume (vph)	124	1419	71	169	1619	69	246	757	89	95	741	254
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	128	1463	73	174	1669	71	254	780	92	98	764	262
RTOR Reduction (vph)	0	6	0	0	5	0	0	9	0	0	37	0
Lane Group Flow (vph)	128	1530	0	174	1735	0	254	863	0	98	989	0
Conf. Peds. (#/hr)	106		44	44		106	78		51	51		78
Conf. Bikes (#/hr)			5			5			5			3
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt		pm+pt			
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	34.2	28.2		34.2	28.2		41.8	29.8		33.8	25.8	
Effective Green, g (s)	35.2	29.2		35.2	29.2		42.8	30.8		34.8	26.8	
Actuated g/C Ratio	0.39	0.32		0.39	0.32		0.48	0.34		0.39	0.30	
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	148	1202		148	1194		235	872		188	727	
v/s Ratio Prot	0.06	0.41		c0.08	c0.47		c0.14	0.34		0.05	c0.40	
v/s Ratio Perm	0.28			0.38			0.37			0.16		
v/c Ratio	0.86	1.27		1.18	1.45		1.08	0.99		0.52	1.36	
Uniform Delay, d1	23.2	30.4		24.9	30.4		24.7	29.4		19.4	31.6	
Progression Factor	1.22	0.90		1.44	0.85		1.29	1.36		1.00	1.00	
Incremental Delay, d2	29.0	127.5		115.0	206.8		67.0	19.9		2.6	170.9	
Delay (s)	57.5	154.9		150.8	232.7		98.8	59.9		22.0	202.5	
Level of Service	E	F		F	F		F	E		C	F	
Approach Delay (s)		147.4			225.2			68.7			186.8	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	165.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	126.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frbp, ped/bikes		0.98			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.92			0.98			1.00			1.00	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1485			1591			3136			3146	
Flt Permitted		0.94			0.76			0.76			0.93	
Satd. Flow (perm)		1397			1218			2389			2928	
Volume (vph)	24	52	127	59	119	40	80	1114	35	14	1055	28
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	26	56	137	63	128	43	86	1198	38	15	1134	30
RTOR Reduction (vph)	0	70	0	0	10	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	149	0	0	224	0	0	1320	0	0	1178	0
Conf. Peds. (#/hr)	10		8	8		10	19		14	14		19
Conf. Bikes (#/hr)			6			4			4			3
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		18.8			18.8			62.8			62.8	
Effective Green, g (s)		18.8			18.8			63.2			63.2	
Actuated g/C Ratio		0.21			0.21			0.70			0.70	
Clearance Time (s)		4.0			4.0			4.4			4.4	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		292			254			1678			2056	
v/s Ratio Prot												
v/s Ratio Perm		0.11			0.18			0.55			0.40	
v/c Ratio		0.51			0.88			0.79			0.57	
Uniform Delay, d1		31.5			34.5			8.9			6.7	
Progression Factor		1.00			1.00			1.00			0.73	
Incremental Delay, d2		1.4			27.8			3.8			0.1	
Delay (s)		32.9			62.4			12.7			5.0	
Level of Service		C			E			B			A	
Approach Delay (s)		32.9			62.4			12.7			5.0	
Approach LOS		C			E			B			A	
Intersection Summary												
HCM Average Control Delay			15.1					HCM Level of Service			B	
HCM Volume to Capacity ratio			0.81									
Actuated Cycle Length (s)			90.0					Sum of lost time (s)			8.0	
Intersection Capacity Utilization			108.0%					ICU Level of Service			G	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑		↘	↑↑	↗	↘	↑↑	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00		0.91		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85		0.98		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	2608	1167		3672		1304	2608	1167	1304	2604	
Flt Permitted	0.07	1.00	1.00		1.00		0.13	1.00	1.00	0.16	1.00	
Satd. Flow (perm)	98	2608	1167		3672		181	2608	1167	218	2604	
Volume (vph)	36	1049	84	0	1654	254	85	985	105	180	1049	11
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	38	1104	88	0	1741	267	89	1037	111	189	1104	12
RTOR Reduction (vph)	0	0	24	0	17	0	0	0	24	0	1	0
Lane Group Flow (vph)	38	1104	64	0	1991	0	89	1037	87	189	1115	0
Turn Type	Perm		Perm		Perm		Perm		Perm	Perm	Perm	
Protected Phases	4		8		2		2		6			
Permitted Phases	4		4		2		2		6			
Actuated Green, G (s)	55.0	55.0	55.0		55.0		55.0	55.0	55.0	55.0	55.0	
Effective Green, g (s)	56.0	56.0	56.0		56.0		56.0	56.0	56.0	56.0	56.0	
Actuated g/C Ratio	0.47	0.47	0.47		0.47		0.47	0.47	0.47	0.47	0.47	
Clearance Time (s)	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	46	1217	545		1714		84	1217	545	102	1215	
v/s Ratio Prot	0.42		c0.54		0.40		0.40		0.43			
v/s Ratio Perm	0.39		0.05		0.49		0.07		c0.87			
v/c Ratio	0.83	0.91	0.12		1.16		1.06	0.85	0.16	1.85	0.92	
Uniform Delay, d1	27.8	29.6	18.1		32.0		32.0	28.3	18.4	32.0	29.9	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	87.7	11.4	0.4		79.6		115.4	7.6	0.6	418.9	12.4	
Delay (s)	115.4	41.0	18.5		111.6		147.4	36.0	19.1	450.9	42.3	
Level of Service	F	D	B		F		F	D	B	F	D	
Approach Delay (s)	41.7		111.6		42.5		101.5					
Approach LOS	D		F		D		F					

Intersection Summary

HCM Average Control Delay	79.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.51		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	117.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘↗	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	3072	4550	1417	1583	3167	1417	1583	3167	1417
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1583	4550	1417	3072	4550	1417	1583	3167	1417	1583	3167	1417
Volume (vph)	151	1447	218	212	1918	208	531	1309	196	305	1171	130
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	154	1477	222	216	1957	212	542	1336	200	311	1195	133
RTOR Reduction (vph)	0	0	14	0	0	98	0	0	4	0	0	0
Lane Group Flow (vph)	154	1477	208	216	1957	114	542	1336	196	311	1195	133
Turn Type	Prot	pm+ov		Prot	Perm		Prot	pm+ov		Prot	pm+ov	
Protected Phases	3	8	1	7	4		1	6	7	5	2	3
Permitted Phases			8			4			6			2
Actuated Green, G (s)	13.0	37.9	50.9	12.1	37.0	37.0	13.0	37.0	49.1	13.0	37.0	50.0
Effective Green, g (s)	13.0	39.9	52.9	12.1	39.0	39.0	13.0	39.0	51.1	13.0	39.0	52.0
Actuated g/C Ratio	0.11	0.33	0.44	0.10	0.32	0.32	0.11	0.32	0.43	0.11	0.32	0.43
Clearance Time (s)	4.0	6.0	4.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0
Vehicle Extension (s)	3.0	4.7	3.0	3.0	5.0	5.0	3.0	4.5	3.0	3.0	4.6	3.0
Lane Grp Cap (vph)	171	1513	672	310	1479	461	171	1029	651	171	1029	661
v/s Ratio Prot	c0.10	0.32	0.03	0.07	c0.43		c0.34	c0.42	0.03	0.20	0.38	0.02
v/s Ratio Perm			0.11			0.08			0.11			0.07
v/c Ratio	0.90	0.98	0.31	0.70	1.32	0.25	3.17	1.30	0.30	1.82	1.16	0.20
Uniform Delay, d1	52.9	39.6	21.7	52.2	40.5	29.7	53.5	40.5	22.7	53.5	40.5	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	41.5	17.7	0.3	6.7	150.3	0.6	991.5	141.5	0.3	390.5	83.5	0.2
Delay (s)	94.4	57.3	22.0	58.8	190.8	30.3	1045.0	182.0	23.0	444.0	124.0	21.3
Level of Service	F	E	C	E	F	C	F	F	C	F	F	C
Approach Delay (s)		56.2		164.6			391.8			176.4		
Approach LOS		E		F			F			F		

Intersection Summary

HCM Average Control Delay	201.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.49		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	133.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.98		1.00	0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	3100		1583	3074		1583	4484		1583	3167	1417
Flt Permitted	0.16	1.00		0.16	1.00		0.11	1.00		0.12	1.00	1.00
Satd. Flow (perm)	274	3100		274	3074		182	4484		206	3167	1417
Volume (vph)	157	1024	167	165	928	224	305	1166	125	92	1130	152
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	159	1034	169	167	937	226	308	1178	126	93	1141	154
RTOR Reduction (vph)	0	15	0	0	23	0	0	14	0	0	0	11
Lane Group Flow (vph)	159	1188	0	167	1140	0	308	1290	0	93	1141	143
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		pm+ov
Protected Phases	1	6		5	2		3	8		7	4	1
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	30.8	23.3		30.8	23.3		44.2	35.7		40.2	33.7	41.2
Effective Green, g (s)	31.3	24.3		31.3	24.3		44.7	36.7		40.7	34.7	41.7
Actuated g/C Ratio	0.35	0.27		0.35	0.27		0.50	0.41		0.45	0.39	0.46
Clearance Time (s)	3.5	5.0		3.5	5.0		3.5	5.0		3.5	5.0	3.5
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	4.3		3.0	4.6	3.0
Lane Grp Cap (vph)	197	837		197	830		215	1828		185	1221	720
v/s Ratio Prot	0.06	c0.38		c0.07	0.37		c0.13	0.29		0.03	0.36	0.02
v/s Ratio Perm	0.22			0.23			c0.59			0.19		0.09
v/c Ratio	0.81	1.42		0.85	1.37		1.43	0.71		0.50	0.93	0.20
Uniform Delay, d1	42.5	32.9		42.8	32.9		22.1	22.2		15.7	26.6	14.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	20.9	195.9		27.1	175.5		219.3	1.4		2.1	13.3	0.1
Delay (s)	63.5	228.8		69.9	208.4		241.4	23.6		17.8	39.9	14.4
Level of Service	E	F		E	F		F	C		B	D	B
Approach Delay (s)		209.5			191.0			65.2			35.6	
Approach LOS		F			F			E			D	

Intersection Summary

HCM Average Control Delay	121.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	114.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.91			0.94	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1583	3145		1583	3161			1512			1566	
Flt Permitted	0.13	1.00		0.34	1.00			0.99			0.98	
Satd. Flow (perm)	216	3145		562	3161			1495			1535	
Volume (vph)	14	709	34	289	1439	19	6	27	66	10	65	55
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	15	762	37	311	1547	20	6	29	71	11	70	59
RTOR Reduction (vph)	0	2	0	0	0	0	0	61	0	0	23	0
Lane Group Flow (vph)	15	797	0	311	1567	0	0	45	0	0	117	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		2		2		4		4		4	
Permitted Phases	2		2		4		4		4		4	
Actuated Green, G (s)	68.6	68.6		68.6	68.6			12.2			12.2	
Effective Green, g (s)	68.9	68.9		68.9	68.9			13.1			13.1	
Actuated g/C Ratio	0.77	0.77		0.77	0.77			0.15			0.15	
Clearance Time (s)	4.3	4.3		4.3	4.3			4.9			4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	165	2408		430	2420			218			223	
v/s Ratio Prot		0.25			0.50							
v/s Ratio Perm	0.07			c0.55				0.03			c0.08	
v/c Ratio	0.09	0.33		0.72	0.65			0.21			0.52	
Uniform Delay, d1	2.7	3.3		5.5	4.9			33.9			35.6	
Progression Factor	0.52	0.51		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.0	0.3		10.1	1.4			0.5			2.2	
Delay (s)	2.4	2.0		15.7	6.3			34.4			37.8	
Level of Service	A	A		B	A			C			D	
Approach Delay (s)		2.0			7.8			34.4			37.8	
Approach LOS		A			A			C			D	

Intersection Summary

HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑	↗	↙	↑↑	↗	↙	↑↑↗		↙	↑↑↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	1.00	0.84	1.00	1.00	0.72	1.00	0.98		1.00	0.97	
Flpb, ped/bikes	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3167	1185	1540	3167	1025	1583	4405		1583	4338	
Flt Permitted	0.11	1.00	1.00	0.40	1.00	1.00	0.16	1.00		0.15	1.00	
Satd. Flow (perm)	184	3167	1185	654	3167	1025	269	4405		242	4338	
Volume (vph)	143	482	5	203	1183	53	21	1326	145	52	1613	258
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	147	497	5	209	1220	55	22	1367	149	54	1663	266
RTOR Reduction (vph)	0	0	3	0	0	29	0	14	0	0	23	0
Lane Group Flow (vph)	147	497	2	209	1220	26	22	1502	0	54	1906	0
Confl. Peds. (#/hr)	136		125	125		136	136		125	125		136
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	7	4	5	3	4	1	5	2		1	6	
Permitted Phases	4		4	4		4	2			6		
Actuated Green, G (s)	42.0	35.0	37.8	42.0	35.0	40.5	26.3	23.5		31.7	26.2	
Effective Green, g (s)	43.5	36.3	39.3	43.5	36.3	42.0	27.8	24.8		33.2	27.5	
Actuated g/C Ratio	0.48	0.40	0.44	0.48	0.40	0.47	0.31	0.28		0.37	0.31	
Clearance Time (s)	4.2	5.3	4.2	4.2	5.3	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	201	1277	570	387	1277	524	127	1214		174	1326	
v/s Ratio Prot	c0.06	0.16	0.00	0.04	c0.39	0.00	0.01	0.34		c0.02	c0.44	
v/s Ratio Perm	0.30		0.00	0.22		0.02	0.05			0.09		
v/c Ratio	0.73	0.39	0.00	0.54	0.96	0.05	0.17	1.24		0.31	1.44	
Uniform Delay, d1	18.0	19.0	14.3	14.2	26.1	13.1	42.6	32.6		22.8	31.2	
Progression Factor	0.74	0.80	0.75	1.01	0.89	0.93	1.51	1.20		1.00	1.00	
Incremental Delay, d2	10.9	0.2	0.0	1.2	12.9	0.0	0.4	110.7		1.0	201.2	
Delay (s)	24.3	15.3	10.7	15.5	36.2	12.3	64.9	149.7		23.8	232.5	
Level of Service	C	B	B	B	D	B	E	F		C	F	
Approach Delay (s)		17.3			32.4			148.5			226.8	
Approach LOS		B			C			F			F	

Intersection Summary

HCM Average Control Delay	130.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	103.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑↑↑		↕	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.86			0.96		1.00	1.00		1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1442			1546		1583	4540		1583	4549	
Flt Permitted		1.00			0.80		0.09	1.00		0.09	1.00	
Satd. Flow (perm)		1442			1271		142	4540		142	4549	
Volume (vph)	0	0	4	272	8	124	1	1678	25	62	1742	2
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	4	306	9	139	1	1885	28	70	1957	2
RTOR Reduction (vph)	0	2	0	0	4	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	2	0	0	450	0	1	1912	0	70	1959	0
Turn Type	Perm		Perm			Perm			Perm			
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		35.5			35.5		47.5	47.5		47.5	47.5	
Effective Green, g (s)		35.0			35.0		47.0	47.0		47.0	47.0	
Actuated g/C Ratio		0.39			0.39		0.52	0.52		0.52	0.52	
Clearance Time (s)		3.5			3.5		3.5	3.5		3.5	3.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		561			494		74	2371		74	2376	
v/s Ratio Prot		0.00						0.42			0.43	
v/s Ratio Perm					c0.35		0.01			c0.49		
v/c Ratio		0.00			0.91		0.01	0.81		0.95	0.82	
Uniform Delay, d1		16.8			26.0		10.3	17.7		20.3	18.0	
Progression Factor		1.00			1.00		1.00	1.00		0.83	0.65	
Incremental Delay, d2		0.0			23.4		0.3	3.1		20.7	0.3	
Delay (s)		16.8			49.4		10.7	20.8		37.6	12.1	
Level of Service		B			D		B	C		D	B	
Approach Delay (s)		16.8			49.4			20.8			13.0	
Approach LOS		B			D			C			B	

Intersection Summary

HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑↑		↖	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4451		1583	4547		1583	4497		1583	4520	
Flt Permitted	0.14	1.00		0.14	1.00		0.13	1.00		0.12	1.00	
Satd. Flow (perm)	237	4451		238	4547		215	4497		204	4520	
Volume (vph)	282	1124	190	135	2114	10	106	1408	119	201	1446	66
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	297	1183	200	142	2225	11	112	1482	125	212	1522	69
RTOR Reduction (vph)	0	26	0	0	1	0	0	11	0	0	5	0
Lane Group Flow (vph)	297	1357	0	142	2235	0	112	1596	0	212	1586	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	35.1	27.1		34.9	27.0		36.4	30.0		39.6	31.6	
Effective Green, g (s)	35.1	28.1		34.9	28.0		36.4	31.0		39.6	32.6	
Actuated g/C Ratio	0.39	0.32		0.39	0.31		0.41	0.35		0.44	0.37	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	199	1405		198	1431		171	1566		199	1656	
v/s Ratio Prot	c0.12	0.30		0.06	c0.49		0.04	0.35		c0.08	0.35	
v/s Ratio Perm	0.47			0.23			0.23			c0.39		
v/c Ratio	1.49	0.97		0.72	1.56		0.65	1.02		1.07	0.96	
Uniform Delay, d1	43.2	30.0		20.7	30.5		19.8	29.0		20.6	27.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	246.3	16.4		11.7	256.4		8.7	27.7		82.2	14.1	
Delay (s)	289.5	46.4		32.4	286.9		28.5	56.7		102.8	41.7	
Level of Service	F	D		C	F		C	E		F	D	
Approach Delay (s)		89.4			271.7			54.8			48.8	
Approach LOS		F			F			D			D	

Intersection Summary

HCM Average Control Delay	129.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	89.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	122.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3154		1583	3136		1583	4496		1583	4482	
Flt Permitted	0.11	1.00		0.11	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	190	3154		190	3136		185	4496		185	4482	
Volume (vph)	212	935	26	173	1547	107	121	1423	121	144	1779	198
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	241	1062	30	197	1758	122	138	1617	138	164	2022	225
RTOR Reduction (vph)	0	2	0	0	6	0	0	11	0	0	15	0
Lane Group Flow (vph)	241	1090	0	197	1875	0	138	1744	0	164	2232	0
Turn Type	pm+pt			pm+pt			Perm			Perm		
Protected Phases	5	2		1	6		8			4		
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	42.1	34.1		42.1	34.1		35.2	35.2		35.2	35.2	
Effective Green, g (s)	42.0	35.0		42.0	35.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio	0.47	0.39		0.47	0.39		0.40	0.40		0.40	0.40	
Clearance Time (s)	3.0	4.9		3.0	4.9		4.8	4.8		4.8	4.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	197	1227		197	1220		74	1798		74	1793	
v/s Ratio Prot	c0.10	0.35		0.08	c0.60		0.39			0.50		
v/s Ratio Perm	0.47			0.39			0.75			c0.89		
v/c Ratio	1.22	0.89		1.00	1.54		1.86	0.97		2.22	1.24	
Uniform Delay, d1	43.7	25.7		19.6	27.5		27.0	26.5		27.0	27.0	
Progression Factor	1.72	1.07		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	131.7	8.2		64.1	245.6		436.0	14.7		588.5	115.1	
Delay (s)	206.7	35.6		83.8	273.1		463.0	41.2		615.5	142.1	
Level of Service	F	D		F	F		F	D		F	F	
Approach Delay (s)	66.6			255.1			72.0			174.3		
Approach LOS	E			F			E			F		

Intersection Summary

HCM Average Control Delay	152.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	129.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.90			0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99			0.99	
Satd. Flow (prot)	1583	3167	1417	1583	3167	1417		1496			1516	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.99			0.99	
Satd. Flow (perm)	1583	3167	1417	1583	3167	1417		1496			1516	
Volume (vph)	17	571	9	55	1409	44	12	20	86	25	18	61
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	18	614	10	59	1515	47	13	22	92	27	19	66
RTOR Reduction (vph)	0	0	7	0	0	24	0	70	0	0	51	0
Lane Group Flow (vph)	18	614	3	59	1515	23	0	57	0	0	61	0
Turn Type	Prot		Perm	Prot		Perm	Split				Split	
Protected Phases	1	6		5	2		3	3			4	4
Permitted Phases			6			2						
Actuated Green, G (s)	2.4	27.9	27.9	4.8	30.3	30.3		21.0			20.9	
Effective Green, g (s)	1.4	28.1	28.1	3.8	30.5	30.5		21.6			20.5	
Actuated g/C Ratio	0.02	0.31	0.31	0.04	0.34	0.34		0.24			0.23	
Clearance Time (s)	3.0	4.2	4.2	3.0	4.2	4.2		4.6			3.6	
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0		3.0			3.0	
Lane Grp Cap (vph)	25	989	442	67	1073	480		359			345	
v/s Ratio Prot	0.01	0.19		c0.04	c0.48			c0.04			c0.04	
v/s Ratio Perm			0.00			0.02						
v/c Ratio	0.72	0.62	0.01	0.88	1.41	0.05		0.16			0.18	
Uniform Delay, d1	44.1	26.4	21.3	42.9	29.8	20.0		27.0			28.0	
Progression Factor	0.84	1.49	2.04	0.66	1.01	1.06		1.00			1.00	
Incremental Delay, d2	41.0	1.6	0.0	34.2	187.4	0.1		0.9			1.1	
Delay (s)	78.1	40.9	43.6	62.6	217.5	21.2		28.0			29.1	
Level of Service	E	D	D	E	F	C		C			C	
Approach Delay (s)		42.0			206.2			28.0			29.1	
Approach LOS		D			F			C			C	

Intersection Summary

HCM Average Control Delay	147.1	HCM Level of Service	F
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.93			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1583	3157		1572	3152			1525			1509	
Flt Permitted	0.08	1.00		0.17	1.00			0.94			0.96	
Satd. Flow (perm)	140	3157		274	3152			1440			1455	
Volume (vph)	31	1196	15	57	1570	32	13	26	39	25	63	117
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	34	1314	16	63	1725	35	14	29	43	27	69	129
RTOR Reduction (vph)	0	1	0	0	1	0	0	34	0	0	13	0
Lane Group Flow (vph)	34	1329	0	63	1759	0	0	52	0	0	212	0
Conf. Peds. (#/hr)	18		27	27		18	4		5	5		4
Conf. Bikes (#/hr)			5			7			1			2
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	63.6	63.6		63.6	63.6			17.3			17.3	
Effective Green, g (s)	64.1	64.1		64.1	64.1			17.9			17.9	
Actuated g/C Ratio	0.71	0.71		0.71	0.71			0.20			0.20	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.6			4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	100	2248		195	2245			286			289	
v/s Ratio Prot		0.42			c0.56							
v/s Ratio Perm	0.24			0.23				0.04			c0.15	
v/c Ratio	0.34	0.59		0.32	0.78			0.18			0.73	
Uniform Delay, d1	4.9	6.4		4.8	8.4			30.0			33.8	
Progression Factor	1.00	1.00		0.60	0.72			1.00			1.00	
Incremental Delay, d2	9.0	1.2		0.4	0.3			0.3			9.3	
Delay (s)	13.9	7.6		3.3	6.3			30.3			43.1	
Level of Service	B	A		A	A			C			D	
Approach Delay (s)		7.7			6.2			30.3			43.1	
Approach LOS		A			A			C			D	

Intersection Summary

HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↗	↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	1.00		1.00	0.98		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2857		1490	2972		1490	2924		1490	2837	
Flt Permitted	0.17	1.00		0.19	1.00		0.10	1.00		0.13	1.00	
Satd. Flow (perm)	261	2857		296	2972		153	2924		199	2837	
Volume (vph)	514	474	180	391	1004	20	118	949	138	27	1072	507
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	535	494	188	407	1046	21	123	989	144	28	1117	528
RTOR Reduction (vph)	0	35	0	0	1	0	0	13	0	0	63	0
Lane Group Flow (vph)	535	647	0	407	1066	0	123	1120	0	28	1582	0
Turn Type	pm+pt			pm+pt			Perm			Perm		
Protected Phases	7	4		3	8			2			2	
Permitted Phases	4			8			2			2		
Actuated Green, G (s)	37.0	23.0		37.0	23.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)	37.0	24.0		37.0	24.0		41.0	41.0		41.0	41.0	
Actuated g/C Ratio	0.41	0.27		0.41	0.27		0.46	0.46		0.46	0.46	
Clearance Time (s)	3.0	5.0		3.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	5.1		3.0	4.1		5.7	5.7		5.7	5.7	
Lane Grp Cap (vph)	285	762		294	793		70	1332		91	1292	
v/s Ratio Prot	c0.27	0.23		0.20	0.36			0.38			0.56	
v/s Ratio Perm	c0.50			0.37			c0.80			0.14		
v/c Ratio	1.88	0.85		1.38	1.34		1.76	0.84		0.31	1.22	
Uniform Delay, d1	40.7	31.3		21.1	33.0		24.5	21.6		15.5	24.5	
Progression Factor	1.00	1.00		2.19	1.33		1.58	1.56		1.00	1.00	
Incremental Delay, d2	407.8	11.4		174.9	155.4		346.0	0.6		8.6	108.2	
Delay (s)	448.5	42.6		221.2	199.3		384.7	34.4		24.1	132.7	
Level of Service	F	D		F	F		F	C		C	F	
Approach Delay (s)		221.1			205.3			68.7			130.9	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	156.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	143.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.91	
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1490	4198		1490	4243		1490	2980	1333	1490	4233	
Flt Permitted	0.15	1.00		0.14	1.00		0.16	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	231	4198		216	4243		257	2980	1333	1490	4233	
Volume (vph)	103	1209	182	319	1696	111	104	1013	180	165	1415	118
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	112	1314	198	347	1843	121	113	1101	196	179	1538	128
RTOR Reduction (vph)	0	22	0	0	7	0	0	0	31	0	11	0
Lane Group Flow (vph)	112	1490	0	347	1957	0	113	1101	165	179	1655	0
Turn Type	pm+pt			pm+pt			Perm	pm+ov	Prot			
Protected Phases	3	8		7	4		2	7	1	6		
Permitted Phases	8			4			2	2				
Actuated Green, G (s)	34.0	26.0		40.0	29.0		24.4	24.4	35.4	10.0	23.0	
Effective Green, g (s)	36.4	27.2		40.0	29.0		24.4	24.4	35.4	11.4	24.4	
Actuated g/C Ratio	0.40	0.30		0.44	0.32		0.27	0.27	0.39	0.13	0.27	
Clearance Time (s)	5.2	5.2		4.0	4.0		4.0	4.0	4.0	5.4	5.4	
Vehicle Extension (s)	3.0	3.0		3.5	3.0		3.0	3.0	3.5	3.0	3.0	
Lane Grp Cap (vph)	222	1269		252	1367		70	808	584	189	1148	
v/s Ratio Prot	0.05	0.35		c0.17	c0.46			0.37	0.03	c0.12	0.39	
v/s Ratio Perm	0.15			0.44			c0.44	0.09				
v/c Ratio	0.50	1.17		1.38	1.43		1.61	1.36	0.28	0.95	1.44	
Uniform Delay, d1	39.2	31.4		23.7	30.5		32.8	32.8	18.6	39.0	32.8	
Progression Factor	1.26	1.21		1.00	1.00		0.73	0.72	0.94	0.87	1.13	
Incremental Delay, d2	1.4	85.4		192.6	198.3		302.2	166.6	0.1	9.8	199.2	
Delay (s)	50.7	123.3		216.3	228.8		326.2	190.3	17.6	43.6	236.3	
Level of Service	D	F		F	F		F	F	B	D	F	
Approach Delay (s)		118.3			227.0			177.2			217.6	
Approach LOS		F			F			F			F	
Intersection Summary												
HCM Average Control Delay			190.3			HCM Level of Service			F			
HCM Volume to Capacity ratio			1.45									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)		16.0				
Intersection Capacity Utilization		111.0%				ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	1.00		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	2944		1509	1587		1509	4315		1509	4265	
Flt Permitted	0.19	1.00		0.31	1.00		0.25	1.00		0.25	1.00	
Satd. Flow (perm)	303	2944		490	1587		397	4315		397	4265	
Volume (vph)	125	620	120	91	1479	10	89	1272	41	55	1730	213
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	130	646	125	95	1541	10	93	1325	43	57	1802	222
RTOR Reduction (vph)	0	1	0	0	1	0	0	8	0	0	8	0
Lane Group Flow (vph)	130	770	0	95	1550	0	93	1360	0	57	2016	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		4		4		2		2		2	
Permitted Phases	4		4		4		2		2		2	
Actuated Green, G (s)	21.0	21.0		21.0	21.0		16.0	16.0		16.0	16.0	
Effective Green, g (s)	21.0	21.0		21.0	21.0		16.0	16.0		16.0	16.0	
Actuated g/C Ratio	0.47	0.47		0.47	0.47		0.36	0.36		0.36	0.36	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	141	1374		229	741		141	1534		141	1516	
v/s Ratio Prot		0.26			c0.98			0.32			c0.47	
v/s Ratio Perm	0.43			0.19			0.23			0.14		
v/c Ratio	0.92	0.56		0.41	2.09		0.66	0.89		0.40	1.33	
Uniform Delay, d1	11.2	8.7		7.9	12.0		12.2	13.6		10.9	14.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.28	1.49	
Incremental Delay, d2	52.6	0.5		1.2	496.2		21.7	7.9		0.8	148.9	
Delay (s)	63.9	9.2		9.2	508.2		33.9	21.6		14.7	170.6	
Level of Service	E	A		A	F		C	C		B	F	
Approach Delay (s)		17.1			479.4			22.4			166.3	
Approach LOS		B			F			C			F	

Intersection Summary

HCM Average Control Delay	194.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.76		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	164.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕		↔	↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	2971		1509	2978		1509	4224		1509	4160	
Flt Permitted	0.10	1.00		0.12	1.00		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	153	2971		184	2978		229	4224		221	4160	
Volume (vph)	94	947	64	231	1422	68	62	1274	178	101	1572	184
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	98	986	67	241	1481	71	65	1327	185	105	1638	192
RTOR Reduction (vph)	0	5	0	0	3	0	0	18	0	0	14	0
Lane Group Flow (vph)	98	1048	0	241	1549	0	65	1494	0	105	1816	0
Conf. Peds. (#/hr)	87		57	57		87	153		33	33		153
Conf. Bikes (#/hr)			5			11			2			7
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	47.4	41.4		55.4	46.4		32.5	27.7		34.7	28.8	
Effective Green, g (s)	46.4	41.4		55.4	46.4		31.5	27.7		33.7	28.8	
Actuated g/C Ratio	0.46	0.41		0.55	0.46		0.32	0.28		0.34	0.29	
Clearance Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	1.0	0.2		1.0	0.2		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	139	1230		234	1382		121	1170		138	1198	
v/s Ratio Prot	0.04	0.35		c0.10	c0.52		0.02	0.35		c0.04	c0.44	
v/s Ratio Perm	0.29			0.47			0.15			0.22		
v/c Ratio	0.71	0.85		1.03	1.12		0.54	1.28		0.76	1.52	
Uniform Delay, d1	22.3	26.5		23.9	26.8		28.4	36.1		28.0	35.6	
Progression Factor	1.82	1.25		1.00	1.00		1.36	1.38		1.00	1.00	
Incremental Delay, d2	11.1	6.8		66.8	64.5		1.3	128.6		19.7	236.4	
Delay (s)	51.7	39.9		90.7	91.3		40.0	178.5		47.6	272.0	
Level of Service	D	D		F	F		D	F		D	F	
Approach Delay (s)		40.9			91.2			172.8			259.8	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	152.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	113.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↔		↖	↗		↖	↗	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.98			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.88			0.98		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1498	1380			1511		1509	2997		1509	3000	
Flt Permitted	0.61	1.00			0.86		0.06	1.00		0.09	1.00	
Satd. Flow (perm)	967	1380			1328		95	2997		145	3000	
Volume (vph)	16	12	41	53	56	20	97	1547	53	12	1773	56
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	17	13	43	56	59	21	102	1628	56	13	1866	59
RTOR Reduction (vph)	0	34	0	0	8	0	0	2	0	0	2	0
Lane Group Flow (vph)	17	22	0	0	128	0	102	1682	0	13	1923	0
Conf. Peds. (#/hr)	7		8	8		7	11		15	15		11
Conf. Bikes (#/hr)						1			2			1
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	20.4	20.4			20.4		71.6	67.4		63.8	62.6	
Effective Green, g (s)	20.4	20.4			20.4		71.6	67.4		62.8	62.6	
Actuated g/C Ratio	0.20	0.20			0.20		0.72	0.67		0.63	0.63	
Clearance Time (s)	4.0	4.0			4.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	5.0	5.0			5.0		1.0	0.2		1.0	0.2	
Lane Grp Cap (vph)	197	282			271		139	2020		94	1878	
v/s Ratio Prot		0.02					c0.04	0.56		0.00	c0.64	
v/s Ratio Perm	0.02				c0.10		0.49			0.09		
v/c Ratio	0.09	0.08			0.47		0.73	0.83		0.14	1.02	
Uniform Delay, d1	32.2	32.2			35.1		22.1	12.1		13.2	18.7	
Progression Factor	1.00	1.00			1.00		1.00	1.00		0.50	1.34	
Incremental Delay, d2	0.4	0.2			2.7		15.8	4.2		0.0	13.7	
Delay (s)	32.6	32.4			37.8		37.9	16.3		6.6	38.7	
Level of Service	C	C			D		D	B		A	D	
Approach Delay (s)		32.5			37.8			17.5			38.5	
Approach LOS		C			D			B			D	

Intersection Summary

HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕↕↕		↗	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.94			0.98		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1474			1523		1490	4255		1490	4269	
Flt Permitted		0.93			0.87		0.08	1.00		0.08	1.00	
Satd. Flow (perm)		1376			1338		121	4255		121	4269	
Volume (vph)	26	114	97	81	277	62	42	1696	75	31	1963	43
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	27	116	99	83	283	63	43	1731	77	32	2003	44
RTOR Reduction (vph)	0	5	0	0	7	0	0	5	0	0	3	0
Lane Group Flow (vph)	0	237	0	0	422	0	43	1803	0	32	2044	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	8		4		4		6		6		2	
Permitted Phases	8		4		4		6		6		2	
Actuated Green, G (s)	29.0		29.0		29.0		51.6		51.6		51.6	
Effective Green, g (s)	30.0		30.0		30.0		52.0		52.0		52.0	
Actuated g/C Ratio	0.33		0.33		0.33		0.58		0.58		0.58	
Clearance Time (s)	5.0		5.0		5.0		4.4		4.4		4.4	
Vehicle Extension (s)	3.0		3.0		3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)	459		446		446		70		2458		70	
v/s Ratio Prot							0.42				c0.48	
v/s Ratio Perm	0.17		c0.32		0.36		0.36		0.27		0.27	
v/c Ratio	0.52		0.95		0.61		0.73		0.46		0.83	
Uniform Delay, d1	24.2		29.2		12.4		13.9		10.9		15.4	
Progression Factor	1.00		1.00		1.90		2.05		1.00		1.00	
Incremental Delay, d2	1.0		29.0		3.6		0.2		20.0		3.4	
Delay (s)	25.1		58.2		27.2		28.8		30.9		18.8	
Level of Service	C		E		C		C		C		B	
Approach Delay (s)	25.1		58.2		28.7		28.7		19.0		19.0	
Approach LOS	C		E		C		C		C		B	

Intersection Summary

HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2931		1490	2961		1490	4221		1490	4235	
Flt Permitted	0.13	1.00		0.12	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	209	2931		185	2961		161	4221		161	4235	
Volume (vph)	119	856	107	294	1307	58	108	1622	171	38	1873	148
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	127	911	114	313	1390	62	115	1726	182	40	1993	157
RTOR Reduction (vph)	0	9	0	0	2	0	0	14	0	0	10	0
Lane Group Flow (vph)	127	1016	0	313	1450	0	115	1894	0	40	2140	0
Turn Type	Perm		pm+pt		Perm		Perm		Perm			
Protected Phases	8		7		4		6		6		2	
Permitted Phases	8		4				6				2	
Actuated Green, G (s)	28.6	28.6		41.6	41.6		37.6	37.6		37.6	37.6	
Effective Green, g (s)	30.0	30.0		43.0	43.0		39.0	39.0		39.0	39.0	
Actuated g/C Ratio	0.33	0.33		0.48	0.48		0.43	0.43		0.43	0.43	
Clearance Time (s)	5.4	5.4		3.5	5.4		5.4	5.4		5.4	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	70	977		219	1415		70	1829		70	1835	
v/s Ratio Prot		0.35		c0.14	0.49			0.45			0.51	
v/s Ratio Perm	c0.61			0.54			c0.71			0.25		
v/c Ratio	1.81	1.04		1.43	1.02		1.64	1.04		0.57	1.17	
Uniform Delay, d1	30.0	30.0		22.8	23.5		25.5	25.5		19.2	25.5	
Progression Factor	0.77	0.76		1.00	1.00		0.22	0.21		1.02	0.87	
Incremental Delay, d2	410.6	37.6		217.5	30.4		295.1	18.2		17.2	78.3	
Delay (s)	433.7	60.5		240.2	53.9		300.8	23.6		36.9	100.6	
Level of Service	F	E		F	D		F	C		D	F	
Approach Delay (s)		101.6			86.9			39.3			99.5	
Approach LOS		F			F			D			F	

Intersection Summary

HCM Average Control Delay	79.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	122.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕			↕	↗		↕	↘
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frbp, ped/bikes	1.00	0.99		1.00	1.00			1.00	0.96		0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			0.99	1.00		0.99	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.99	
Satd. Flow (prot)	1498	2977		1506	3010			1523	1293		1433	
Flt Permitted	0.11	1.00		0.22	1.00			0.64	1.00		0.90	
Satd. Flow (perm)	179	2977		341	3010			1012	1293		1312	
Volume (vph)	25	986	54	72	1631	15	38	14	30	47	43	83
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	26	1016	56	74	1681	15	39	14	31	48	44	86
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	26	0	18	0
Lane Group Flow (vph)	26	1070	0	74	1696	0	0	53	5	0	160	0
Conf. Peds. (#/hr)	45		31	31		45	9		19	19		9
Conf. Bikes (#/hr)			4			12			2			4
Turn Type	Perm			pm+pt			Perm		Perm	Perm		
Protected Phases		2		1	6			8				4
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	69.1	69.1		75.5	75.5			16.5	16.5			16.5
Effective Green, g (s)	69.1	69.1		75.5	75.5			16.5	16.5			16.5
Actuated g/C Ratio	0.69	0.69		0.76	0.76			0.16	0.16			0.16
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	0.2	0.2		1.0	0.2			4.0	4.0			3.0
Lane Grp Cap (vph)	124	2057		285	2273			167	213			216
v/s Ratio Prot		0.36		0.01	c0.56							
v/s Ratio Perm	0.14			0.19				0.05	0.00			c0.12
v/c Ratio	0.21	0.52		0.26	0.75			0.32	0.02			0.74
Uniform Delay, d1	5.6	7.5		4.4	6.9			36.8	35.0			39.7
Progression Factor	2.21	2.09		0.50	0.65			1.00	1.00			1.00
Incremental Delay, d2	3.6	0.9		0.0	0.2			1.5	0.1			12.9
Delay (s)	16.0	16.4		2.2	4.7			38.3	35.1			52.6
Level of Service	B	B		A	A			D	D			D
Approach Delay (s)		16.4			4.6			37.1				52.6
Approach LOS		B			A			D				D

Intersection Summary

HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↗		↙	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	0.99		0.89	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1509	3018	3002		1398	
Flt Permitted	0.12	1.00	1.00		0.99	
Satd. Flow (perm)	193	3018	3002		1398	
Volume (vph)	27	871	1504	55	42	205
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	27	880	1519	56	42	207
RTOR Reduction (vph)	0	0	2	0	51	0
Lane Group Flow (vph)	27	880	1573	0	198	0
Turn Type	Perm					
Protected Phases		2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	74.7	74.7	74.7		17.3	
Effective Green, g (s)	74.2	74.2	74.2		17.8	
Actuated g/C Ratio	0.74	0.74	0.74		0.18	
Clearance Time (s)	3.5	3.5	3.5		4.5	
Vehicle Extension (s)	0.2	0.2	0.2		3.0	
Lane Grp Cap (vph)	143	2239	2227		249	
v/s Ratio Prot		0.29	c0.52		c0.14	
v/s Ratio Perm	0.14					
v/c Ratio	0.19	0.39	0.71		0.80	
Uniform Delay, d1	3.9	4.7	7.0		39.4	
Progression Factor	0.34	0.26	0.23		1.00	
Incremental Delay, d2	2.7	0.5	1.3		15.9	
Delay (s)	4.0	1.7	2.9		55.3	
Level of Service	A	A	A		E	
Approach Delay (s)		1.8	2.9		55.3	
Approach LOS		A	A		E	

Intersection Summary

HCM Average Control Delay	7.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕↕↕		↗	↕↕↕		↗	↕↕	↗	↗	↕↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4464		1583	4535		1583	3167	1417	1583	3167	1417
Flt Permitted	0.10	1.00		0.23	1.00		0.13	1.00	1.00	0.19	1.00	1.00
Satd. Flow (perm)	171	4464		391	4535		215	3167	1417	318	3167	1417
Volume (vph)	208	725	104	288	1555	34	102	713	151	224	1103	356
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	234	815	117	324	1747	38	115	801	170	252	1239	400
RTOR Reduction (vph)	0	20	0	0	2	0	0	0	51	0	0	139
Lane Group Flow (vph)	234	912	0	324	1783	0	115	801	119	252	1239	261
Turn Type	pm+pt			pm+pt			Perm		pm+ov	Perm		Perm
Protected Phases	1	6		5	2			8	5		4	
Permitted Phases	6			2			8		8	4		4
Actuated Green, G (s)	47.0	38.0		47.0	38.0		29.1	29.1	38.1	29.1	29.1	29.1
Effective Green, g (s)	47.0	39.0		47.0	39.0		31.0	31.0	39.0	31.0	31.0	31.0
Actuated g/C Ratio	0.52	0.43		0.52	0.43		0.34	0.34	0.43	0.34	0.34	0.34
Clearance Time (s)	3.0	5.0		3.0	5.0		5.9	5.9	3.0	5.9	5.9	5.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	215	1934		310	1965		74	1091	677	110	1091	488
v/s Ratio Prot	c0.10	0.20		0.09	0.39			0.25	0.02		0.39	
v/s Ratio Perm	c0.47			0.45			0.53		0.07	c0.79		0.18
v/c Ratio	1.09	0.47		1.05	0.91		1.55	0.73	0.18	2.29	1.14	0.53
Uniform Delay, d1	22.4	18.2		17.0	23.8		29.5	25.9	15.6	29.5	29.5	23.7
Progression Factor	1.00	1.00		2.69	1.41		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	86.9	0.8		28.8	0.8		305.1	4.4	0.1	608.6	72.7	4.2
Delay (s)	109.3	19.0		74.5	34.4		334.6	30.3	15.8	638.1	102.2	27.9
Level of Service	F	B		E	C		F	C	B	F	F	C
Approach Delay (s)		37.1			40.5			60.2			157.9	
Approach LOS		D			D			E			F	

Intersection Summary

HCM Average Control Delay	78.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	103.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Fr _t	1.00	0.99		1.00	1.00		1.00	0.98		1.00	0.98	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	2983		1509	3004		1509	2965		1509	2942	
Fl _t Permitted	0.07	1.00		0.37	1.00		0.11	1.00		0.12	1.00	
Satd. Flow (perm)	113	2983		593	3004		176	2965		192	2942	
Volume (vph)	148	534	45	170	1430	45	79	795	105	66	1205	240
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	159	574	48	183	1538	48	85	855	113	71	1296	258
RTOR Reduction (vph)	0	4	0	0	2	0	0	10	0	0	17	0
Lane Group Flow (vph)	159	618	0	183	1584	0	85	958	0	71	1537	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	6			2			4			8		
Permitted Phases	6			2			4			8		
Actuated Green, G (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	56.0	56.0		56.0	56.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.36	0.36		0.36	0.36	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	4.9	4.9		4.9	4.9		4.9	4.9		4.9	4.9	
Lane Grp Cap (vph)	63	1670		332	1682		63	1067		69	1059	
v/s Ratio Prot		0.21			0.53			0.32			0.52	
v/s Ratio Perm	c1.40			0.31			0.48			0.37		
v/c Ratio	2.52	0.37		0.55	0.94		1.35	0.90		1.03	1.45	
Uniform Delay, d ₁	22.0	12.2		14.0	20.5		32.0	30.3		32.0	32.0	
Progression Factor	1.00	1.00		1.00	1.00		1.16	1.17		1.00	1.00	
Incremental Delay, d ₂	730.2	0.6		6.5	11.9		228.3	11.2		116.6	208.6	
Delay (s)	752.2	12.8		20.5	32.4		265.4	46.6		148.6	240.6	
Level of Service	F	B		C	C		F	D		F	F	
Approach Delay (s)		163.4			31.1			64.3			236.6	
Approach LOS		F			C			E			F	

Intersection Summary

HCM Average Control Delay	121.4	HCM Level of Service	F
HCM Volume to Capacity ratio	2.10		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	127.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
133: Norton Ave & Fairfax Ave



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frbp, ped/bikes	0.97		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.89		1.00	1.00	1.00	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1366		1509	3018	2994	
Flt Permitted	0.99		0.12	1.00	1.00	
Satd. Flow (perm)	1366		195	3018	2994	
Volume (vph)	33	135	97	899	1439	41
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	33	136	98	908	1454	41
RTOR Reduction (vph)	44	0	0	0	2	0
Lane Group Flow (vph)	125	0	98	908	1493	0
Conf. Peds. (#/hr)			32			32
Conf. Bikes (#/hr)		21				3
Turn Type			Perm			
Protected Phases	4			2	2	
Permitted Phases			2			
Actuated Green, G (s)	23.4		69.0	69.0	69.0	
Effective Green, g (s)	23.4		68.6	68.6	68.6	
Actuated g/C Ratio	0.23		0.69	0.69	0.69	
Clearance Time (s)	4.0		3.6	3.6	3.6	
Vehicle Extension (s)	3.0		0.2	0.2	0.2	
Lane Grp Cap (vph)	320		134	2070	2054	
v/s Ratio Prot	c0.09			0.30	0.50	
v/s Ratio Perm			c0.50			
v/c Ratio	0.39		0.73	0.44	0.73	
Uniform Delay, d1	32.3		9.9	7.1	9.8	
Progression Factor	1.00		1.06	0.07	0.45	
Incremental Delay, d2	3.6		11.2	0.2	0.2	
Delay (s)	35.9		21.6	0.7	4.6	
Level of Service	D		C	A	A	
Approach Delay (s)	35.9			2.8	4.6	
Approach LOS	D			A	A	
Intersection Summary						
HCM Average Control Delay			5.9		HCM Level of Service	A
HCM Volume to Capacity ratio			0.65			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			78.5%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘		↗	↗↘	↗		↗↘	↗
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00		0.91	0.91
Frbp, ped/bikes	1.00	0.97		1.00	0.99		1.00	1.00	0.78		1.00	0.82
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1509	2839		1509	2984		1509	3018	1056		2874	1004
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.65	1.00
Satd. Flow (perm)	1509	2839		1509	2984		1509	3018	1056		1870	1004
Volume (vph)	110	753	201	230	1440	49	87	909	79	78	1121	278
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	115	784	209	240	1500	51	91	947	82	81	1168	290
RTOR Reduction (vph)	0	2	0	0	3	0	0	0	53	0	0	110
Lane Group Flow (vph)	115	991	0	240	1548	0	91	947	29	0	1249	180
Conf. Peds. (#/hr)	148		120	120		148	115		139	139		116
Conf. Bikes (#/hr)			6			2			3			
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases								8				4
Actuated Green, G (s)	7.0	47.0		7.0	47.0		7.0	35.0	35.0		25.0	25.0
Effective Green, g (s)	6.0	47.0		6.0	47.0		6.0	35.0	35.0		25.0	25.0
Actuated g/C Ratio	0.06	0.47		0.06	0.47		0.06	0.35	0.35		0.25	0.25
Clearance Time (s)	3.0	4.0		3.0	4.0		3.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	1.0	0.2		1.0	0.2		1.0	5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	91	1334		91	1402		91	1056	370		468	251
v/s Ratio Prot	0.08	0.35		c0.16	c0.52		0.06	c0.31				
v/s Ratio Perm									0.03		c0.67	0.18
v/c Ratio	1.26	0.74		2.64	1.10		1.00	0.90	0.08		2.67	0.72
Uniform Delay, d1	47.0	21.6		47.0	26.5		47.0	30.8	21.7		37.5	34.3
Progression Factor	0.67	1.98		1.08	0.87		1.00	1.00	1.00		0.68	0.59
Incremental Delay, d2	168.8	2.9		757.9	54.9		94.3	11.8	0.4		755.2	11.5
Delay (s)	200.4	45.6		808.7	77.9		141.3	42.6	22.1		780.9	31.6
Level of Service	F	D		F	E		F	D	C		F	C
Approach Delay (s)		61.7			175.8			49.1			639.7	
Approach LOS		E			F			D			F	

Intersection Summary

HCM Average Control Delay	256.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	141.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑↑↑		↕	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.98			0.98		1.00	1.00		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1611			1612		1583	4542		1583	4508	
Flt Permitted		0.85			0.82		0.10	1.00		0.23	1.00	
Satd. Flow (perm)		1380			1335		161	4542		376	4508	
Volume (vph)	44	131	37	100	214	53	53	1025	12	29	1526	100
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	45	135	38	103	221	55	55	1057	12	30	1573	103
RTOR Reduction (vph)	0	5	0	0	9	0	0	1	0	0	6	0
Lane Group Flow (vph)	0	213	0	0	370	0	55	1068	0	30	1670	0
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases	8		4		4		6		6		2	
Permitted Phases	8		4		4		6		6		2	
Actuated Green, G (s)	27.2				27.2		53.0		53.0		53.0	
Effective Green, g (s)	28.6				28.6		53.4		53.4		53.4	
Actuated g/C Ratio	0.32				0.32		0.59		0.59		0.59	
Clearance Time (s)	5.4				5.4		4.4		4.4		4.4	
Vehicle Extension (s)	3.0				3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)	439				424		96		2695		223	
v/s Ratio Prot							0.24				c0.37	
v/s Ratio Perm	0.15				c0.28		0.34				0.08	
v/c Ratio	0.49				0.87		0.57		0.40		0.13	
Uniform Delay, d1	24.8				29.0		11.3		9.7		8.1	
Progression Factor	1.00				1.00		1.22		0.79		1.00	
Incremental Delay, d2	0.8				17.7		15.2		0.3		1.3	
Delay (s)	25.6				46.6		28.9		7.9		9.3	
Level of Service	C				D		C		A		A	
Approach Delay (s)	25.6				46.6		9.0				12.9	
Approach LOS	C				D		A				B	

Intersection Summary

HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3111		1583	3141		1583	4490		1583	4474	
Flt Permitted	0.11	1.00		0.21	1.00		0.12	1.00		0.15	1.00	
Satd. Flow (perm)	180	3111		356	3141		208	4490		244	4474	
Volume (vph)	84	674	89	198	1426	81	66	971	94	90	1469	184
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	88	702	93	206	1485	84	69	1011	98	94	1530	192
RTOR Reduction (vph)	0	11	0	0	4	0	0	13	0	0	17	0
Lane Group Flow (vph)	88	784	0	206	1565	0	69	1096	0	94	1705	0
Turn Type	Perm		pm+pt		Perm		Perm		Perm			
Protected Phases	8		7		4		6		6		2	
Permitted Phases	8		4		6		6		6		2	
Actuated Green, G (s)	35.7	35.7		48.7	48.7		31.1	31.1		31.1	31.1	
Effective Green, g (s)	37.0	37.0		50.0	50.0		32.0	32.0		32.0	32.0	
Actuated g/C Ratio	0.41	0.41		0.56	0.56		0.36	0.36		0.36	0.36	
Clearance Time (s)	5.3	5.3		3.5	5.3		4.9	4.9		4.9	4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	1279		320	1745		74	1596		87	1591	
v/s Ratio Prot		0.25		0.06	c0.50			0.24			0.38	
v/s Ratio Perm	c0.49			0.29			0.33			c0.39		
v/c Ratio	1.19	0.61		0.64	0.90		0.93	0.69		1.08	1.07	
Uniform Delay, d1	26.5	20.9		12.4	17.7		28.0	24.7		29.0	29.0	
Progression Factor	1.00	1.00		1.78	1.68		1.06	1.07		1.32	1.20	
Incremental Delay, d2	164.3	2.2		0.4	0.8		53.8	1.1		109.8	42.5	
Delay (s)	190.8	23.1		22.6	30.6		83.5	27.5		148.0	77.2	
Level of Service	F	C		C	C		F	C		F	E	
Approach Delay (s)		39.8			29.6			30.8			80.9	
Approach LOS		D			C			C			F	

Intersection Summary

HCM Average Control Delay	47.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	113.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↖		↕		↖	↕	↖
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85		1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00		0.95	1.00	1.00
Satd. Flow (prot)	1509	2989		1509	3018	1350		3011		1509	3018	1350
Flt Permitted	0.08	1.00		0.18	1.00	1.00		0.68		0.26	1.00	1.00
Satd. Flow (perm)	133	2989		291	3018	1350		2057		410	3018	1350
Volume (vph)	144	914	61	111	1439	282	18	624	4	88	1315	146
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	148	942	63	114	1484	291	19	643	4	91	1356	151
RTOR Reduction (vph)	0	4	0	0	0	57	0	1	0	0	0	84
Lane Group Flow (vph)	148	1001	0	114	1484	234	0	665	0	91	1356	67
Turn Type	pm+pt			pm+pt			Perm	Perm		Perm		Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	55.8	47.9		54.2	47.1	47.1		34.0		34.0	34.0	34.0
Effective Green, g (s)	54.8	47.9		53.2	47.1	47.1		34.0		34.0	34.0	34.0
Actuated g/C Ratio	0.55	0.48		0.53	0.47	0.47		0.34		0.34	0.34	0.34
Clearance Time (s)	3.0	4.0		3.0	4.0	4.0		4.0		4.0	4.0	4.0
Vehicle Extension (s)	1.0	3.0		1.0	3.0	3.0		3.5		3.5	3.5	3.5
Lane Grp Cap (vph)	168	1432		229	1421	636		699		139	1026	459
v/s Ratio Prot	c0.06	0.33		0.03	c0.49					c0.45		
v/s Ratio Perm	0.42			0.23		0.17		0.32		0.22		0.05
v/c Ratio	0.88	0.70		0.50	1.04	0.37		0.95		0.65	1.32	0.15
Uniform Delay, d1	23.0	20.4		13.8	26.4	16.9		32.2		28.0	33.0	22.9
Progression Factor	1.00	1.00		1.74	0.73	0.88		1.00		1.00	1.00	1.00
Incremental Delay, d2	36.8	2.9		0.1	22.3	0.1		24.1		21.6	151.6	0.7
Delay (s)	59.9	23.3		24.0	41.8	15.0		56.3		49.6	184.6	23.6
Level of Service	E	C		C	D	B		E		D	F	C
Approach Delay (s)		28.0			36.6			56.3			161.7	
Approach LOS		C			D			E			F	

Intersection Summary

HCM Average Control Delay	74.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	133.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1583	3157		1583	3151			1616			1608	
Flt Permitted	0.14	1.00		0.21	1.00			0.95			0.95	
Satd. Flow (perm)	228	3157		345	3151			1548			1529	
Volume (vph)	29	935	19	94	1457	50	11	86	23	62	306	101
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	30	964	20	97	1502	52	11	89	24	64	315	104
RTOR Reduction (vph)	0	2	0	0	4	0	0	15	0	0	4	0
Lane Group Flow (vph)	30	982	0	97	1550	0	0	109	0	0	479	0
Turn Type	Perm		Perm		Perm			Perm				
Protected Phases	6		2		2			8				
Permitted Phases	6		2		8			4				
Actuated Green, G (s)	28.9	28.9		28.9	28.9			21.9			21.9	
Effective Green, g (s)	29.2	29.2		29.2	29.2			22.8			22.8	
Actuated g/C Ratio	0.49	0.49		0.49	0.49			0.38			0.38	
Clearance Time (s)	4.3	4.3		4.3	4.3			4.9			4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	111	1536		168	1533			588			581	
v/s Ratio Prot		0.31			c0.49							
v/s Ratio Perm	0.13			0.28				0.07			c0.31	
v/c Ratio	0.27	0.64		0.58	1.01			0.19			0.82	
Uniform Delay, d1	9.1	11.5		11.0	15.4			12.4			16.8	
Progression Factor	0.78	0.72		1.00	1.00			1.00			1.00	
Incremental Delay, d2	5.4	1.9		13.7	25.8			0.2			9.3	
Delay (s)	12.5	10.1		24.7	41.2			12.6			26.1	
Level of Service	B	B		C	D			B			C	
Approach Delay (s)		10.2			40.2			12.6			26.1	
Approach LOS		B			D			B			C	

Intersection Summary			
HCM Average Control Delay	27.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑		↑↓		↑	↑↓	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)		4.0			4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95	1.00		1.00		0.95	0.95	
Frt		1.00			1.00	0.85		0.96		1.00	0.98	
Flt Protected		1.00			1.00	1.00		0.98		0.95	0.97	
Satd. Flow (prot)		3014			3018	1350		1499		1433	1427	
Flt Permitted		1.00			1.00	1.00		0.98		0.95	0.97	
Satd. Flow (perm)		3014			3018	1350		1499		1433	1427	
Volume (vph)	0	746	7	0	1795	564	16	19	15	320	28	25
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	794	7	0	1910	600	17	20	16	340	30	27
RTOR Reduction (vph)	0	0	0	0	0	92	0	15	0	0	6	0
Lane Group Flow (vph)	0	801	0	0	1910	508	0	38	0	199	192	0
Turn Type					pm+ov		Split			Split		
Protected Phases		2			6	4	3	3		4	4	
Permitted Phases						6						
Actuated Green, G (s)		62.6			62.6	81.9		6.1		19.3	19.3	
Effective Green, g (s)		62.6			62.6	81.9		6.1		19.3	19.3	
Actuated g/C Ratio		0.63			0.63	0.82		0.06		0.19	0.19	
Clearance Time (s)		4.0			4.0	4.0		4.0		4.0	4.0	
Vehicle Extension (s)		4.5			4.5	4.0		3.0		4.0	4.0	
Lane Grp Cap (vph)		1887			1889	1160		91		277	275	
v/s Ratio Prot		0.27			c0.63	0.08		c0.03		c0.14	0.13	
v/s Ratio Perm						0.29						
v/c Ratio		0.42			1.01	0.44		0.42		0.72	0.70	
Uniform Delay, d1		9.5			18.7	2.6		45.2		37.8	37.6	
Progression Factor		1.32			1.00	1.00		1.00		1.50	1.53	
Incremental Delay, d2		0.3			23.5	0.4		3.1		8.5	7.5	
Delay (s)		12.9			42.2	2.9		48.3		65.3	64.9	
Level of Service		B			D	A		D		E	E	
Approach Delay (s)		12.9			32.8			48.3			65.1	
Approach LOS		B			C			D			E	

Intersection Summary

HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↗	↕			↕	↗		↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.98		1.00	1.00			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (prot)	1509	2960		1509	3006			1545	1350		1494	
Flt Permitted	0.10	1.00		0.16	1.00			0.97	1.00		0.99	
Satd. Flow (perm)	161	2960		258	3006			1545	1350		1494	
Volume (vph)	79	737	108	487	1804	49	113	89	558	10	17	15
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	776	114	513	1899	52	119	94	587	11	18	16
RTOR Reduction (vph)	0	10	0	0	2	0	0	0	413	0	14	0
Lane Group Flow (vph)	83	880	0	513	1949	0	0	213	174	0	31	0
Turn Type	Perm		pm+pt			Split		pm+ov		Split		
Protected Phases	6		5 7			4		4 5 7		8 8		
Permitted Phases	6		2					4				
Actuated Green, G (s)	39.4	39.4		48.4	45.4			15.8	21.8		13.0	
Effective Green, g (s)	39.4	39.4		48.4	45.4			15.8	20.8		13.0	
Actuated g/C Ratio	0.39	0.39		0.48	0.45			0.16	0.21		0.13	
Clearance Time (s)	4.0	4.0			4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0			3.0			4.0			3.0	
Lane Grp Cap (vph)	63	1166		187	1365			244	281		194	
v/s Ratio Prot		0.30		c0.14	0.65			c0.14	0.03		c0.02	
v/s Ratio Perm	0.51			c1.19					0.10			
v/c Ratio	1.32	0.75		2.74	1.43			0.87	0.62		0.16	
Uniform Delay, d1	30.3	26.1		24.9	27.3			41.1	36.0		38.6	
Progression Factor	1.00	1.00		1.00	1.00			1.41	7.38		1.00	
Incremental Delay, d2	219.9	4.6		799.4	196.9			18.2	1.6		1.8	
Delay (s)	250.2	30.7		824.2	224.2			76.3	267.2		40.4	
Level of Service	F	C		F	F			E	F		D	
Approach Delay (s)		49.4			349.2			216.4			40.4	
Approach LOS		D			F			F			D	

Intersection Summary

HCM Average Control Delay	253.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.8
Intersection Capacity Utilization	114.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗	↖	↔			↕	↗		↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)			4.0	4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor			1.00	0.95	0.95			0.95	1.00		0.95	
Frbp, ped/bikes			1.00	1.00	0.99			1.00	1.00		1.00	
Flpb, ped/bikes			1.00	1.00	1.00			1.00	1.00		1.00	
Frt			0.86	1.00	0.97			1.00	0.85		1.00	
Flt Protected			1.00	0.95	0.96			1.00	1.00		1.00	
Satd. Flow (prot)			1374	1433	1396			3017	1350		3012	
Flt Permitted			1.00	0.95	0.96			0.95	1.00		1.00	
Satd. Flow (perm)			1374	1433	1396			2870	1350		3012	
Volume (vph)	0	0	10	1687	9	163	5	729	526	0	613	4
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	10	1721	9	166	5	744	537	0	626	4
RTOR Reduction (vph)	0	0	4	0	8	0	0	0	344	0	1	0
Lane Group Flow (vph)	0	0	6	1014	874	0	0	749	193	0	629	0
Confl. Peds. (#/hr)	22						22	22				22
Confl. Bikes (#/hr)							2					1
Turn Type			custom	Prot			Perm		Perm			
Protected Phases				4	8			2				2
Permitted Phases			4				2		2			
Actuated Green, G (s)			56.0	56.0	56.0			35.0	35.0			35.0
Effective Green, g (s)			56.0	56.0	56.0			36.0	36.0			36.0
Actuated g/C Ratio			0.56	0.56	0.56			0.36	0.36			0.36
Clearance Time (s)			4.0	4.0	4.0			5.0	5.0			5.0
Vehicle Extension (s)			7.0	7.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)			769	802	782			1033	486			1084
v/s Ratio Prot				c0.71	0.63							0.21
v/s Ratio Perm			0.00					c0.26	0.14			
v/c Ratio			0.01	1.26	1.12			0.73	0.40			0.58
Uniform Delay, d1			9.7	22.0	22.0			27.7	23.9			25.9
Progression Factor			1.00	1.00	1.00			0.79	2.61			1.36
Incremental Delay, d2			0.0	128.9	69.4			3.0	1.6			0.2
Delay (s)			9.7	150.9	91.4			24.8	64.0			35.4
Level of Service			A	F	F			C	E			D
Approach Delay (s)		9.7			123.2			41.2				35.4
Approach LOS		A			F			D				D
Intersection Summary												
HCM Average Control Delay			80.8									F
HCM Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			100.0									8.0
Intersection Capacity Utilization			99.5%									F
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↗		↖	↕		↖	↕	↗
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	0.94	1.00	0.98		1.00	0.99		1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1509	1588	1268	1492	1470		1509	2985		1505	3018	1288
Flt Permitted	0.12	1.00	1.00	0.45	1.00		0.09	1.00		0.20	1.00	1.00
Satd. Flow (perm)	199	1588	1268	714	1470		140	2985		316	3018	1288
Volume (vph)	81	245	127	67	320	173	141	902	37	29	1657	619
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	87	263	137	72	344	186	152	970	40	31	1782	666
RTOR Reduction (vph)	0	0	93	0	20	0	0	3	0	0	0	105
Lane Group Flow (vph)	87	263	44	72	510	0	152	1007	0	31	1782	561
Conf. Peds. (#/hr)	31		29	29		31	16		30	30		16
Conf. Bikes (#/hr)			2			4			2			1
Turn Type	pm+pt		Perm	pm+pt		pm+pt		pm+pt		pm+pt		Perm
Protected Phases	1	6		5	2		7	4		3		8
Permitted Phases	6		6	2		4			8			8
Actuated Green, G (s)	35.5	31.5	31.5	36.0	32.0		52.5	46.7		44.2	41.4	41.4
Effective Green, g (s)	35.0	32.0	32.0	35.0	32.0		53.0	47.2		43.2	41.4	41.4
Actuated g/C Ratio	0.35	0.32	0.32	0.35	0.32		0.53	0.47		0.43	0.41	0.41
Clearance Time (s)	3.0	4.5	4.5	3.0	4.0		3.0	4.5		3.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	1.0	2.5		1.0	5.0		1.0	5.0	5.0
Lane Grp Cap (vph)	109	508	406	273	470		178	1409		158	1249	533
v/s Ratio Prot	c0.02	0.17		0.01	c0.35		c0.06	0.34		0.00	c0.59	
v/s Ratio Perm	0.26		0.03	0.08		0.39			0.08			0.44
v/c Ratio	0.80	0.52	0.11	0.26	1.09		0.85	0.71		0.20	1.43	1.05
Uniform Delay, d1	30.2	27.7	23.9	23.0	34.0		24.5	21.0		17.3	29.3	29.3
Progression Factor	1.00	1.00	1.00	0.97	0.98		1.81	1.58		0.89	0.82	0.75
Incremental Delay, d2	32.1	0.9	0.1	0.2	64.4		20.5	2.0		0.1	193.3	35.5
Delay (s)	62.3	28.6	24.1	22.5	97.9		64.8	35.2		15.5	217.4	57.4
Level of Service	E	C	C	C	F		E	D		B	F	E
Approach Delay (s)		33.3			88.8			39.1			171.9	
Approach LOS		C			F			D			F	

Intersection Summary			
HCM Average Control Delay	114.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	114.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.95			0.95	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99			1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3013		2927	3016		2927	2928			3018	1290
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	2927	3013		2927	3016		2927	2928			3018	1290
Volume (vph)	271	809	5	392	1538	4	218	794	111	0	1444	530
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	288	861	5	417	1636	4	232	845	118	0	1536	564
RTOR Reduction (vph)	0	1	0	0	0	0	0	11	0	0	0	140
Lane Group Flow (vph)	288	865	0	417	1640	0	232	952	0	0	1536	424
Conf. Peds. (#/hr)	75		79	79		75	30		64	64		30
Conf. Bikes (#/hr)			8			23			2			3
Turn Type	Prot			Prot			Prot					Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases												4
Actuated Green, G (s)	9.0	29.5		9.0	29.5		9.0	48.0			34.0	34.0
Effective Green, g (s)	9.0	30.0		9.0	30.0		10.0	49.0			35.0	35.0
Actuated g/C Ratio	0.09	0.30		0.09	0.30		0.10	0.49			0.35	0.35
Clearance Time (s)	4.0	4.5		4.0	4.5		5.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0		1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	263	904		263	905		293	1435			1056	452
v/s Ratio Prot	0.10	0.29		c0.14	c0.54		c0.08	0.33			c0.51	
v/s Ratio Perm												0.33
v/c Ratio	1.10	0.96		1.59	1.81		0.79	0.66			1.45	0.94
Uniform Delay, d1	45.5	34.4		45.5	35.0		44.0	19.3			32.5	31.4
Progression Factor	0.83	1.13		1.28	0.95		1.00	1.00			0.71	0.95
Incremental Delay, d2	79.3	19.2		269.7	367.0		12.8	1.3			205.0	4.2
Delay (s)	116.9	58.0		327.8	400.1		56.7	20.6			228.1	34.1
Level of Service	F	E		F	F		E	C			F	C
Approach Delay (s)		72.7			385.5			27.6			176.0	
Approach LOS		E			F			C			F	

Intersection Summary

HCM Average Control Delay	196.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	126.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↗	↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Fr _t	1.00	0.99		1.00	1.00		1.00	0.97		1.00	0.99	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	2988		1509	3009		1509	2924		1509	2978	
Fl _t Permitted	0.21	1.00		0.95	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	329	2988		1509	3009		159	2924		159	2978	
Volume (vph)	40	503	35	422	1034	21	60	987	257	83	1638	158
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	547	38	459	1124	23	65	1073	279	90	1780	172
RTOR Reduction (vph)	0	4	0	0	2	0	0	26	0	0	8	0
Lane Group Flow (vph)	43	581	0	459	1145	0	65	1326	0	90	1944	0
Turn Type	Perm		Prot		Perm		Perm		Perm			
Protected Phases	8		7		4		6		2			
Permitted Phases	8						6		2			
Actuated Green, G (s)	25.0	25.0		13.0	41.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	26.0	26.0		12.0	42.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio	0.29	0.29		0.13	0.47		0.44	0.44		0.44	0.44	
Clearance Time (s)	5.0	5.0		3.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	95	863		201	1404		71	1300		71	1324	
v/s Ratio Prot		0.19		c0.30	c0.38			0.45			c0.65	
v/s Ratio Perm	0.13						0.41			0.57		
v/c Ratio	0.45	0.67		2.28	0.82		0.92	1.02		1.27	1.47	
Uniform Delay, d ₁	26.2	28.3		39.0	20.7		23.4	25.0		25.0	25.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d ₂	14.8	4.2		593.1	5.3		84.9	30.2		194.7	215.0	
Delay (s)	41.0	32.4		632.1	26.0		108.4	55.2		219.7	240.0	
Level of Service	D	C		F	C		F	E		F	F	
Approach Delay (s)		33.0			199.2			57.6			239.1	
Approach LOS		C			F			E			F	

Intersection Summary

HCM Average Control Delay	160.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	125.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)					4.0			4.0		4.0	4.0	
Lane Util. Factor					1.00			0.95		1.00	0.95	
Frbp, ped/bikes					1.00			1.00		1.00	1.00	
Flpb, ped/bikes					1.00			1.00		1.00	1.00	
Frt					0.95			1.00		1.00	1.00	
Flt Protected					0.97			1.00		0.95	1.00	
Satd. Flow (prot)					1531			3147		1583	3167	
Flt Permitted					0.82			1.00		0.15	1.00	
Satd. Flow (perm)					1286			3147		255	3167	
Volume (vph)	0	0	0	148	0	98	0	1158	27	77	2073	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	157	0	104	0	1232	29	82	2205	0
RTOR Reduction (vph)	0	0	0	0	24	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	237	0	0	1259	0	82	2205	0
Conf. Peds. (#/hr)								10		32	32	10
Conf. Bikes (#/hr)			1							2		4
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)					30.5			61.0		61.0	61.0	
Effective Green, g (s)					31.0			61.0		61.0	61.0	
Actuated g/C Ratio					0.31			0.61		0.61	0.61	
Clearance Time (s)					4.5			4.0		4.0	4.0	
Vehicle Extension (s)					3.0			5.0		5.0	5.0	
Lane Grp Cap (vph)					399			1920		156	1932	
v/s Ratio Prot								0.40			c0.70	
v/s Ratio Perm					c0.18					0.32		
v/c Ratio					0.59			0.66		0.53	1.14	
Uniform Delay, d1					29.2			12.7		11.2	19.5	
Progression Factor					1.00			1.00		1.00	1.00	
Incremental Delay, d2					6.4			1.8		12.1	70.4	
Delay (s)					35.5			14.4		23.3	89.9	
Level of Service					D			B		C	F	
Approach Delay (s)		0.0			35.5			14.4			87.5	
Approach LOS		A			D			B			F	
Intersection Summary												
HCM Average Control Delay			59.8									HCM Level of Service E
HCM Volume to Capacity ratio			0.96									
Actuated Cycle Length (s)			100.0									Sum of lost time (s) 8.0
Intersection Capacity Utilization			94.1%									ICU Level of Service F
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↔↔	↑↑		↗	↑↑	↗	↗	↑↑↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00	1.00	0.91	
Frbp, ped/bikes	1.00	1.00	0.94	1.00	1.00		1.00	1.00	0.95	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3072	3167	1325	3072	3146		1583	3167	1352	1583	4427	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.09	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3072	3167	1325	3072	3146		155	3167	1352	171	4427	
Volume (vph)	83	581	62	367	1191	29	99	1127	332	20	1916	217
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	86	599	64	378	1228	30	102	1162	342	21	1975	224
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	91	0	11	0
Lane Group Flow (vph)	86	599	64	378	1257	0	102	1162	251	21	2188	0
Conf. Peds. (#/hr)	73		41	41		73	67		26	26		67
Conf. Bikes (#/hr)			3			4			1			4
Turn Type	Prot	pm+ov		Prot		pm+pt		pm+ov	pm+pt			
Protected Phases	5	2	3	1	6	3	8	1	7	4		
Permitted Phases			2			8		8	4			
Actuated Green, G (s)	6.4	48.8	55.8	8.0	50.4	48.5	41.7	49.7	40.3	37.5		
Effective Green, g (s)	6.4	50.1	57.1	8.0	51.7	49.9	43.1	51.1	41.7	38.9		
Actuated g/C Ratio	0.05	0.42	0.48	0.07	0.43	0.42	0.36	0.43	0.35	0.32		
Clearance Time (s)	4.0	5.3	4.0	4.0	5.3	4.0	5.4	4.0	4.0	5.4		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	164	1322	675	205	1355	148	1137	621	92	1435		
v/s Ratio Prot	0.03	c0.19	0.01	c0.12	c0.40	c0.04	0.37	0.03	0.01	c0.49		
v/s Ratio Perm			0.04			0.25		0.16	0.07			
v/c Ratio	0.52	0.45	0.09	1.84	0.93	0.69	1.02	0.40	0.23	1.52		
Uniform Delay, d1	55.3	25.1	17.3	56.0	32.4	56.9	38.5	23.9	30.1	40.5		
Progression Factor	0.80	0.52	0.52	0.94	1.26	1.28	1.32	2.45	1.00	1.00		
Incremental Delay, d2	2.7	1.0	0.1	384.7	4.0	6.1	24.0	0.2	1.3	239.6		
Delay (s)	47.1	14.1	9.0	437.1	44.8	78.8	74.7	58.6	31.4	280.1		
Level of Service	D	B	A	F	D	E	E	E	C	F		
Approach Delay (s)		17.4			135.5		71.5			277.8		
Approach LOS		B			F		E			F		

Intersection Summary

HCM Average Control Delay	155.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘	↑↑	↗	↘	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3167	1417	1583	3098		1583	3167	1417	1583	3085	
Flt Permitted	0.07	1.00	1.00	0.34	1.00		0.13	1.00	1.00	0.27	1.00	
Satd. Flow (perm)	122	3167	1417	567	3098		211	3167	1417	442	3085	
Volume (vph)	64	594	250	217	1081	183	249	730	43	168	887	183
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	67	625	263	228	1138	193	262	768	45	177	934	193
RTOR Reduction (vph)	0	0	39	0	12	0	0	0	24	0	15	0
Lane Group Flow (vph)	67	625	224	228	1319	0	262	768	21	177	1112	0
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6		6	2			8		8		4	
Actuated Green, G (s)	54.6	54.6	54.6	54.6	54.6		54.0	54.0	54.0	54.0	54.0	
Effective Green, g (s)	56.5	56.5	56.5	56.5	56.5		55.5	55.5	55.5	55.5	55.5	
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.47		0.46	0.46	0.46	0.46	0.46	
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9		5.5	5.5	5.5	5.5	5.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	57	1491	667	267	1459		98	1465	655	204	1427	
v/s Ratio Prot		0.20			0.43			0.24			0.36	
v/s Ratio Perm	c0.55		0.16	0.40			c1.24		0.01	0.40		
v/c Ratio	1.18	0.42	0.34	0.85	0.90		2.67	0.52	0.03	0.87	0.78	
Uniform Delay, d1	31.8	20.9	20.0	28.1	29.3		32.2	22.9	17.6	29.0	27.1	
Progression Factor	1.21	1.14	1.22	1.08	1.05		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	162.3	0.7	1.1	8.6	2.7		781.3	1.3	0.1	36.0	4.3	
Delay (s)	200.6	24.6	25.4	38.8	33.3		813.6	24.2	17.7	65.0	31.4	
Level of Service	F	C	C	D	C		F	C	B	E	C	
Approach Delay (s)		37.2			34.1			216.3			35.9	
Approach LOS		D			C			F			D	

Intersection Summary

HCM Average Control Delay	75.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	110.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑		↘	↗	↗		↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00		0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85		1.00		1.00	1.00	0.85		0.94	
Flt Protected	0.95	1.00	1.00		1.00		0.95	0.95	1.00		0.99	
Satd. Flow (prot)	1509	3018	1350		3013		1433	1437	1350		1467	
Flt Permitted	0.07	1.00	1.00		1.00		0.95	0.95	1.00		0.99	
Satd. Flow (perm)	109	3018	1350		3013		1433	1437	1350		1467	
Volume (vph)	35	931	283	0	1533	17	634	2	47	22	17	34
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	36	960	292	0	1580	18	654	2	48	23	18	35
RTOR Reduction (vph)	0	0	52	0	0	0	0	0	38	0	26	0
Lane Group Flow (vph)	36	960	240	0	1598	0	327	329	10	0	50	0
Turn Type	pm+pt		Perm				Split		Perm	Split		
Protected Phases	1	6			2		4	4		3	3	
Permitted Phases	6		6						4			
Actuated Green, G (s)	73.0	70.3	70.3		70.3		26.0	26.0	26.0		6.0	
Effective Green, g (s)	72.0	70.3	70.3		70.3		26.0	26.0	26.0		6.0	
Actuated g/C Ratio	0.60	0.59	0.59		0.59		0.22	0.22	0.22		0.05	
Clearance Time (s)	3.0	4.0	4.0		4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	1.0	6.0	6.0		6.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	85	1768	791		1765		310	311	293		73	
v/s Ratio Prot	c0.01	0.32			c0.53		0.23	c0.23			c0.03	
v/s Ratio Perm	0.25		0.18						0.01			
v/c Ratio	0.42	0.54	0.30		0.91		1.05	1.06	0.04		0.69	
Uniform Delay, d1	17.5	15.1	12.5		21.9		47.0	47.0	37.1		56.1	
Progression Factor	0.52	0.45	0.23		1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.8	0.8	0.7		8.2		66.3	67.1	0.0		23.8	
Delay (s)	9.9	7.6	3.5		30.1		113.3	114.1	37.2		79.9	
Level of Service	A	A	A		C		F	F	D		E	
Approach Delay (s)		6.7			30.1			108.5			79.9	
Approach LOS		A			C			F			E	

Intersection Summary

HCM Average Control Delay	38.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↘	↕		↘	↕	↘	↘	↕	↕
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.93	1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.99	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	2965		1504	2987		1509	3018	1254	1488	2897	
Flt Permitted	0.06	1.00		0.22	1.00		0.17	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	98	2965		343	2987		276	3018	1254	272	2897	
Volume (vph)	70	911	62	10	2471	77	1	602	118	15	915	183
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	80	1047	71	11	2840	89	1	692	136	17	1052	210
RTOR Reduction (vph)	0	4	0	0	2	0	0	0	101	0	17	0
Lane Group Flow (vph)	80	1114	0	11	2927	0	1	692	35	17	1245	0
Confl. Peds. (#/hr)	103		80	80		103	58		40	40		58
Confl. Bikes (#/hr)			3			8						
Turn Type	pm+pt		pm+pt		Perm		Perm		Perm			
Protected Phases	5	2	1	6		8	8		4			
Permitted Phases	2		6		8		8		4			
Actuated Green, G (s)	69.0	64.7	61.5	60.7	23.0	23.0	23.0	23.0	23.0	23.0	23.0	
Effective Green, g (s)	69.0	64.7	61.0	60.7	23.0	23.0	23.0	23.0	23.0	23.0	23.0	
Actuated g/C Ratio	0.69	0.65	0.61	0.61	0.23	0.23	0.23	0.23	0.23	0.23	0.23	
Clearance Time (s)	4.0	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	1.0	5.0	1.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	128	1918	213	1813	63	694	288	63	666			
v/s Ratio Prot	c0.03	0.38	0.00	c0.98		0.23			c0.43			
v/s Ratio Perm	0.40		0.03		0.00		0.03	0.06				
v/c Ratio	0.62	0.58	0.05	1.61	0.02	1.00	0.12	0.27	1.87			
Uniform Delay, d1	26.0	10.0	8.1	19.6	29.8	38.5	30.5	31.6	38.5			
Progression Factor	1.93	0.66	0.57	0.73	1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	5.5	1.1	0.0	276.7	0.5	33.5	0.9	10.2	397.0			
Delay (s)	55.6	7.7	4.6	291.1	30.2	71.9	31.4	41.8	435.5			
Level of Service	E	A	A	F	C	E	C	D	F			
Approach Delay (s)		10.9		290.1		65.2			430.3			
Approach LOS		B		F		E			F			

Intersection Summary

HCM Average Control Delay	235.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	127.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕	↗	↖	↕		↗	↕	↖
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1509	2974		1509	1588	1350	1509	2952		1509	3018	1350
Flt Permitted	0.13	1.00		0.39	1.00	1.00	0.21	1.00		0.19	1.00	1.00
Satd. Flow (perm)	205	2974		626	1588	1350	341	2952		306	3018	1350
Volume (vph)	20	457	48	306	840	158	91	806	138	173	889	173
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	481	51	322	884	166	96	848	145	182	936	182
RTOR Reduction (vph)	0	11	0	0	0	62	0	18	0	0	0	32
Lane Group Flow (vph)	21	521	0	322	884	104	96	975	0	182	936	150
Turn Type	Perm			Perm		Perm	Perm			Perm		Perm
Protected Phases		2			2			4			4	
Permitted Phases	2			2		2	4			4		4
Actuated Green, G (s)	31.0	31.0		31.0	31.0	31.0	36.0	36.0		36.0	36.0	36.0
Effective Green, g (s)	31.0	31.0		31.0	31.0	31.0	36.0	36.0		36.0	36.0	36.0
Actuated g/C Ratio	0.41	0.41		0.41	0.41	0.41	0.48	0.48		0.48	0.48	0.48
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	85	1229		259	656	558	164	1417		147	1449	648
v/s Ratio Prot		0.18			c0.56			0.33			0.31	
v/s Ratio Perm	0.10			0.51		0.08	0.28			c0.59		0.11
v/c Ratio	0.25	0.42		1.24	1.35	0.19	0.59	0.69		1.24	0.65	0.23
Uniform Delay, d1	14.4	15.7		22.0	22.0	14.0	14.1	15.1		19.5	14.7	11.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.8	1.1		137.7	166.4	0.7	14.4	2.7		152.0	2.2	0.8
Delay (s)	21.2	16.7		159.7	188.4	14.7	28.5	17.9		171.5	16.9	12.2
Level of Service	C	B		F	F	B	C	B		F	B	B
Approach Delay (s)		16.9			160.7			18.8			37.9	
Approach LOS		B			F			B			D	

Intersection Summary

HCM Average Control Delay	69.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↗	↖	↗	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.91	0.95	1.00	1.00	
Frt	1.00	0.95		1.00	1.00		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1509	2852		1509	3011		1433	1413	1282	1509	1496	
Flt Permitted	0.06	1.00		0.10	1.00		0.95	0.98	1.00	0.95	1.00	
Satd. Flow (perm)	88	2852		160	3011		1433	1413	1282	1509	1496	
Volume (vph)	6	865	499	592	2022	30	263	97	251	16	18	11
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	6	911	525	623	2128	32	277	102	264	17	19	12
RTOR Reduction (vph)	0	68	0	0	1	0	0	0	164	0	10	0
Lane Group Flow (vph)	6	1368	0	623	2159	0	190	189	100	17	21	0
Turn Type	Perm		pm+pt			Split		pm+ov		Split		
Protected Phases	6		5			4		4		5		
Permitted Phases	6		2							4		
Actuated Green, G (s)	72.0	72.0		81.0	81.0		7.0	7.0	13.0	21.0	21.0	
Effective Green, g (s)	72.0	72.0		81.0	81.0		7.0	7.0	12.0	20.0	20.0	
Actuated g/C Ratio	0.60	0.60		0.68	0.68		0.06	0.06	0.10	0.17	0.17	
Clearance Time (s)	4.0	4.0		3.0	4.0		4.0	4.0	3.0	3.0	3.0	
Vehicle Extension (s)	4.5	4.5		1.0	4.5		2.0	2.0	1.0	2.0	2.0	
Lane Grp Cap (vph)	53	1711		164	2032		84	82	171	252	249	
v/s Ratio Prot		0.48		c0.16	0.72		0.13	c0.13	0.02	0.01	c0.01	
v/s Ratio Perm	0.07			c2.41					0.05			
v/c Ratio	0.11	0.80		3.80	1.06		2.26	2.30	0.59	0.07	0.08	
Uniform Delay, d1	10.3	18.5		19.2	19.5		56.5	56.5	51.6	42.1	42.3	
Progression Factor	1.00	1.00		1.89	0.78		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.3	4.0		1268.7	35.6		604.0	623.7	3.3	0.5	0.7	
Delay (s)	14.6	22.5		1305.1	50.8		660.5	680.2	54.9	42.7	42.9	
Level of Service	B	C		F	D		F	F	D	D	D	
Approach Delay (s)		22.4			331.6			417.6				42.8
Approach LOS		C			F			F				D

Intersection Summary

HCM Average Control Delay	249.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.96		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	116.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.91			0.96		1.00	0.98		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1430			1502		1509	2967		1509	3004	
Flt Permitted		0.92			0.87		0.18	1.00		0.44	1.00	
Satd. Flow (perm)		1330			1332		293	2967		696	3004	
Volume (vph)	23	15	80	74	91	68	274	456	58	13	994	31
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	24	16	83	77	95	71	285	475	60	14	1035	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	123	0	0	243	0	285	535	0	14	1067	0
Turn Type	Perm		Perm			Perm			Perm			
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		17.4			17.4		26.0	26.0		26.0	26.0	
Effective Green, g (s)		18.0			18.0		25.0	25.0		25.0	25.0	
Actuated g/C Ratio		0.35			0.35		0.49	0.49		0.49	0.49	
Clearance Time (s)		4.6			4.6		3.0	3.0		3.0	3.0	
Vehicle Extension (s)		4.5			4.5		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		469			470		144	1454		341	1473	
v/s Ratio Prot								0.18				0.36
v/s Ratio Perm		0.09			c0.18		c0.97			0.02		
v/c Ratio		0.26			0.52		1.98	0.37		0.04	0.72	
Uniform Delay, d1		11.8			13.1		13.0	8.1		6.8	10.3	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.4			4.0		464.6	0.2		0.0	1.8	
Delay (s)		13.1			17.1		477.6	8.2		6.8	12.1	
Level of Service		B			B		F	A		A	B	
Approach Delay (s)		13.1			17.1			171.4			12.0	
Approach LOS		B			B			F			B	

Intersection Summary

HCM Average Control Delay	70.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	51.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕			↕			↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.95			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	
Frt	1.00	0.99		1.00	1.00			0.91			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1509	2986		1504	3007			1358			1496	
Flt Permitted	0.08	1.00		0.23	1.00			0.76			0.96	
Satd. Flow (perm)	123	2986		372	3007			1037			1446	
Volume (vph)	22	762	33	352	2321	28	56	51	208	19	224	71
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	24	819	35	378	2496	30	60	55	224	20	241	76
RTOR Reduction (vph)	0	3	0	0	1	0	0	70	0	0	10	0
Lane Group Flow (vph)	24	851	0	378	2525	0	0	269	0	0	327	0
Conf. Peds. (#/hr)	48		34	34		48	40		40	40		40
Conf. Bikes (#/hr)			3			4						2
Turn Type	pm+pt		pm+pt		Perm		Perm					
Protected Phases	5	2		1	6			8				4
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	55.5	51.5		65.5	58.0			26.0				26.0
Effective Green, g (s)	55.0	51.5		65.5	58.0			26.5				26.5
Actuated g/C Ratio	0.55	0.52		0.66	0.58			0.26				0.26
Clearance Time (s)	3.5	4.0		3.5	4.0			4.5				4.5
Vehicle Extension (s)	1.0	5.0		1.0	5.0			3.0				3.0
Lane Grp Cap (vph)	116	1538		357	1744			275				383
v/s Ratio Prot	0.01	0.29		c0.11	c0.84							
v/s Ratio Perm	0.11			0.59				c0.26				0.23
v/c Ratio	0.21	0.55		1.06	1.45			0.98				0.85
Uniform Delay, d1	47.3	16.4		13.1	21.0			36.5				34.9
Progression Factor	1.00	1.00		2.49	0.45			1.00				1.00
Incremental Delay, d2	4.0	1.4		33.0	201.9			47.8				16.6
Delay (s)	51.3	17.9		65.7	211.3			84.3				51.5
Level of Service	D	B		E	F			F				D
Approach Delay (s)		18.8			192.4			84.3				51.5
Approach LOS		B			F			F				D

Intersection Summary

HCM Average Control Delay	139.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	134.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖	↖	↕	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3112		1583	3078		1583	1667	1417	1583	1599	
Flt Permitted	0.20	1.00		0.21	1.00		0.13	1.00	1.00	0.39	1.00	
Satd. Flow (perm)	327	3112		342	3078		211	1667	1417	648	1599	
Volume (vph)	52	660	86	80	1235	285	55	444	90	61	570	212
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	717	93	87	1342	310	60	483	98	66	620	230
RTOR Reduction (vph)	0	17	0	0	33	0	0	0	24	0	2	0
Lane Group Flow (vph)	57	794	0	87	1619	0	60	483	74	66	848	0
Turn Type	Perm			Perm			Perm			Perm	Perm	
Protected Phases	6			2			8			8	4	
Permitted Phases	6			2			8			8	4	
Actuated Green, G (s)	20.1	20.1		20.1	20.1		31.0	31.0	31.0	31.0	31.0	
Effective Green, g (s)	20.4	20.4		20.4	20.4		31.6	31.6	31.6	31.6	31.6	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.53	0.53	0.53	0.53	0.53	
Clearance Time (s)	4.3	4.3		4.3	4.3		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	1058		116	1047		111	878	746	341	842	
v/s Ratio Prot		0.25		c0.53			0.29			c0.53		
v/s Ratio Perm	0.17			0.25			0.28		0.05	0.10		
v/c Ratio	0.51	0.75		0.75	1.55		0.54	0.55	0.10	0.19	1.01	
Uniform Delay, d1	15.8	17.5		17.5	19.8		9.4	9.5	7.1	7.5	14.2	
Progression Factor	1.00	1.00		0.95	0.97		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	16.0	4.9		4.0	246.3		17.6	2.5	0.3	1.3	32.7	
Delay (s)	31.8	22.4		20.6	265.5		27.0	11.9	7.4	8.7	46.9	
Level of Service	C	C		C	F		C	B	A	A	D	
Approach Delay (s)		23.0		253.2			12.6			44.1		
Approach LOS		C		F			B			D		

Intersection Summary

HCM Average Control Delay	122.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	123.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↙	↕			↕			↕	↗
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)				4.0	4.0			4.0			4.0	4.0
Lane Util. Factor				1.00	0.95			0.95			0.95	1.00
Frt				1.00	1.00			1.00			1.00	0.85
Flt Protected				0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)				1509	3011			3006			3018	1350
Flt Permitted				0.95	1.00			0.92			1.00	1.00
Satd. Flow (perm)				1509	3011			2764			3018	1350
Volume (vph)	0	0	0	179	2144	30	27	328	0	0	284	102
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	190	2281	32	29	349	0	0	302	109
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	190	2312	0	0	378	0	0	302	109
Turn Type				custom			custom					Free
Protected Phases				2	2		3	3			1	
Permitted Phases				4	4		6	6				Free
Actuated Green, G (s)				34.9	34.9			27.5			20.0	100.0
Effective Green, g (s)				33.5	33.5			26.5			20.0	100.0
Actuated g/C Ratio				0.34	0.34			0.26			0.20	1.00
Clearance Time (s)				3.0	3.0			3.0			4.0	
Vehicle Extension (s)				1.0	1.0			1.0			4.0	
Lane Grp Cap (vph)				566	1129			742			604	1350
v/s Ratio Prot				0.05	c0.28			c0.02			c0.10	
v/s Ratio Perm				0.08	0.48			c0.11				0.08
v/c Ratio				0.34	2.05			0.51			0.50	0.08
Uniform Delay, d1				25.3	33.2			31.2			35.6	0.0
Progression Factor				1.00	1.00			0.35			1.00	1.00
Incremental Delay, d2				1.6	474.5			0.2			2.9	0.1
Delay (s)				26.9	507.7			11.1			38.5	0.1
Level of Service				C	F			B			D	A
Approach Delay (s)		0.0			471.2			11.1			28.3	
Approach LOS		A			F			B			C	

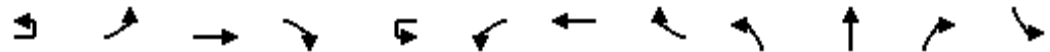
Intersection Summary			
HCM Average Control Delay	363.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	101.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1562	1663		1583	1637			1652			1613	
Flt Permitted	0.24	1.00		0.14	1.00			0.95			0.92	
Satd. Flow (perm)	398	1663		230	1637			1580			1490	
Volume (vph)	267	915	10	32	550	46	49	689	22	28	328	71
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	281	963	11	34	579	48	52	725	23	29	345	75
RTOR Reduction (vph)	0	1	0	0	5	0	0	2	0	0	12	0
Lane Group Flow (vph)	281	973	0	34	622	0	0	798	0	0	437	0
Conf. Peds. (#/hr)	28		25	25		28	21		28	28		21
Conf. Bikes (#/hr)			13			10			6			3
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)	29.0	29.0		29.0	29.0			23.0			23.0	
Effective Green, g (s)	29.0	29.0		29.0	29.0			23.0			23.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.38			0.38	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	192	804		111	791			606			571	
v/s Ratio Prot		0.59			0.38							
v/s Ratio Perm	c0.71			0.15				c0.51			0.29	
v/c Ratio	1.46	1.21		0.31	0.79			1.32			0.76	
Uniform Delay, d1	15.5	15.5		9.4	12.9			18.5			16.1	
Progression Factor	1.00	1.00		0.73	0.82			2.14			1.00	
Incremental Delay, d2	234.9	106.3		2.4	2.8			149.6			9.4	
Delay (s)	250.4	121.8		9.3	13.4			189.2			25.6	
Level of Service	F	F		A	B			F			C	
Approach Delay (s)		150.6			13.2			189.2			25.6	
Approach LOS		F			B			F			C	

Intersection Summary

HCM Average Control Delay	113.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	130.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔	↔↔↔	↔		↔	↔↔↔	↔	↔	↔	↔	↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		1.00	0.91	1.00		1.00	0.91	1.00	1.00	1.00		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.99		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1583	4550	1417		1583	4550	1417	1583	1658		1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.54	1.00		0.12
Satd. Flow (perm)		1583	4550	1417		1583	4550	1417	902	1658		202
Volume (vph)	35	127	2343	16	3	108	2120	195	17	482	17	189
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	36	131	2415	16	3	111	2186	201	18	497	18	195
RTOR Reduction (vph)	0	0	0	6	0	0	0	87	0	1	0	0
Lane Group Flow (vph)	0	167	2415	10	0	114	2186	114	18	514	0	195
Turn Type	Prot	Prot		Perm	Prot	Prot		pm+ov	pm+pt			pm+pt
Protected Phases	1	1	6		5	5	2	7	3	8		7
Permitted Phases				6				2	8			4
Actuated Green, G (s)		16.4	39.2	39.2		12.4	35.2	47.2	40.2	37.4		53.4
Effective Green, g (s)		16.4	40.2	40.2		12.4	36.2	48.2	42.2	39.4		55.4
Actuated g/C Ratio		0.14	0.34	0.34		0.10	0.30	0.40	0.35	0.33		0.46
Clearance Time (s)		4.0	5.0	5.0		4.0	5.0	4.0	4.0	6.0		4.0
Vehicle Extension (s)		3.0	4.4	4.4		3.0	4.3	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		216	1524	475		164	1373	616	333	544		231
v/s Ratio Prot		c0.11	c0.53			0.07	0.48	0.02	0.00	c0.31		c0.08
v/s Ratio Perm				0.01				0.06	0.02			0.31
v/c Ratio		0.77	1.58	0.02		0.70	1.59	0.18	0.05	0.94		0.84
Uniform Delay, d1		50.0	39.9	26.7		52.0	41.9	23.2	25.5	39.2		25.6
Progression Factor		1.00	1.00	1.00		1.45	0.38	0.66	1.00	1.00		1.22
Incremental Delay, d2		15.7	266.3	0.1		1.2	266.8	0.0	0.1	25.2		20.2
Delay (s)		65.7	306.2	26.8		76.5	282.9	15.4	25.6	64.5		51.5
Level of Service		E	F	C		E	F	B	C	E		D
Approach Delay (s)			289.0				252.0			63.2		
Approach LOS			F				F			E		

Intersection Summary

HCM Average Control Delay	233.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	112.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations	↓	↘
Ideal Flow (vphpl)	1700	1700
Total Lost time (s)	4.0	
Lane Util. Factor	1.00	
Frt	0.97	
Flt Protected	1.00	
Satd. Flow (prot)	1622	
Flt Permitted	1.00	
Satd. Flow (perm)	1622	
Volume (vph)	251	54
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	259	56
RTOR Reduction (vph)	5	0
Lane Group Flow (vph)	310	0
Turn Type		
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	46.6	
Effective Green, g (s)	48.6	
Actuated g/C Ratio	0.41	
Clearance Time (s)	6.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	657	
v/s Ratio Prot	0.19	
v/s Ratio Perm		
v/c Ratio	0.47	
Uniform Delay, d1	26.3	
Progression Factor	1.06	
Incremental Delay, d2	0.4	
Delay (s)	28.2	
Level of Service	C	
Approach Delay (s)	37.1	
Approach LOS	D	

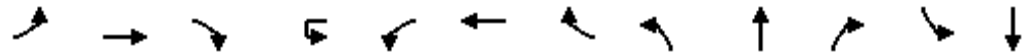
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔		↔	↕		↔	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1572	1640		1583	1634		1583	3028		1583	3084	
Flt Permitted	0.31	1.00		0.08	1.00		0.12	1.00		0.12	1.00	
Satd. Flow (perm)	521	1640		133	1634		208	3028		208	3084	
Volume (vph)	272	927	83	85	499	54	320	887	237	19	1188	170
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	283	966	86	89	520	56	333	924	247	20	1238	177
RTOR Reduction (vph)	0	3	0	0	4	0	0	27	0	0	12	0
Lane Group Flow (vph)	283	1049	0	89	572	0	333	1144	0	20	1403	0
Conf. Peds. (#/hr)	18		24	24		18	27		25	25		27
Conf. Bikes (#/hr)			5			42			5			2
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	49.0	49.0		49.0	49.0		31.1	31.1		31.1	31.1	
Effective Green, g (s)	50.0	50.0		50.0	50.0		32.0	32.0		32.0	32.0	
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.36	0.36		0.36	0.36	
Clearance Time (s)	5.0	5.0		5.0	5.0		4.9	4.9		4.9	4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	289	911		74	908		74	1077		74	1097	
v/s Ratio Prot		0.64			0.35			0.38			0.45	
v/s Ratio Perm	0.54			c0.67			c1.60			0.10		
v/c Ratio	0.98	1.15		1.20	0.63		4.50	1.06		0.27	1.28	
Uniform Delay, d1	19.5	20.0		20.0	13.7		29.0	29.0		20.7	29.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	47.9	80.8		169.1	3.3		1605.7	45.5		8.8	132.5	
Delay (s)	67.4	100.8		189.1	17.0		1634.7	74.5		29.5	161.5	
Level of Service	E	F		F	B		F	E		C	F	
Approach Delay (s)		93.7			40.0			420.0			159.7	
Approach LOS		F			D			F			F	

Intersection Summary

HCM Average Control Delay	205.0	HCM Level of Service	F
HCM Volume to Capacity ratio	2.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	144.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗		↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1583	4550	1417		1583	4550	1417	1583	3167	1417	1583	3167
Flt Permitted	0.95	1.00	1.00		0.95	1.00	1.00	0.11	1.00	1.00	0.22	1.00
Satd. Flow (perm)	1583	4550	1417		1583	4550	1417	175	3167	1417	373	3167
Volume (vph)	88	2235	199	10	81	1639	420	150	815	124	10	955
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	91	2304	205	10	84	1690	433	155	840	128	10	985
RTOR Reduction (vph)	0	0	16	0	0	0	102	0	0	77	0	0
Lane Group Flow (vph)	91	2304	189	0	94	1690	331	155	840	51	10	985
Turn Type	Prot		pm+ov	Prot	Prot		Perm	pm+pt		Perm	pm+pt	
Protected Phases	1	6	3	5	5	2		3	8		7	4
Permitted Phases			6				2	8		8		4
Actuated Green, G (s)	6.0	41.5	46.5		5.0	40.5	40.5	47.0	42.0	42.0	39.0	38.0
Effective Green, g (s)	6.0	42.8	48.8		5.0	41.8	41.8	50.2	44.2	44.2	42.2	40.2
Actuated g/C Ratio	0.05	0.39	0.44		0.05	0.38	0.38	0.46	0.40	0.40	0.38	0.37
Clearance Time (s)	4.0	5.3	5.0		4.0	5.3	5.3	5.0	6.2	6.2	5.0	6.2
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	4.2	4.2	3.0	3.6
Lane Grp Cap (vph)	86	1770	680		72	1729	538	157	1273	569	165	1157
v/s Ratio Prot	0.06	c0.51	0.02		c0.06	0.37		c0.05	0.27		0.00	0.31
v/s Ratio Perm			0.12				0.23	c0.40		0.04	0.02	
v/c Ratio	1.06	1.30	0.28		1.31	0.98	0.61	0.99	0.66	0.09	0.06	0.85
Uniform Delay, d1	52.0	33.6	19.4		52.5	33.6	27.6	25.1	26.8	20.4	21.9	32.1
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	113.8	140.0	0.2		208.1	16.9	5.2	67.4	1.4	0.1	0.2	6.4
Delay (s)	165.8	173.6	19.7		260.6	50.6	32.8	92.5	28.2	20.5	22.0	38.5
Level of Service	F	F	B		F	D	C	F	C	C	C	D
Approach Delay (s)		161.2				56.0			36.2			37.3
Approach LOS		F				E			D			D

Intersection Summary

HCM Average Control Delay	89.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	7
Ideal Flow (vphpl)	1700
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1417
Flt Permitted	1.00
Satd. Flow (perm)	1417
Volume (vph)	58
Peak-hour factor, PHF	0.97
Adj. Flow (vph)	60
RTOR Reduction (vph)	10
Lane Group Flow (vph)	50
Turn Type	pm+ov
Protected Phases	1
Permitted Phases	4
Actuated Green, G (s)	44.0
Effective Green, g (s)	46.2
Actuated g/C Ratio	0.42
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	595
v/s Ratio Prot	0.00
v/s Ratio Perm	0.03
v/c Ratio	0.08
Uniform Delay, d1	19.2
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	19.2
Level of Service	B
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑			↑↑↑	↔	↔	↔↔↔	↔			
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.91			0.86	1.00	0.86	0.81	0.86			
Frt	1.00	1.00			1.00	0.85	1.00	0.95	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.98	1.00			
Satd. Flow (prot)	3072	4550			5733	1417	1362	3769	1218			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.98	1.00			
Satd. Flow (perm)	3072	4550			5733	1417	1362	3769	1218			
Volume (vph)	556	1876	0	0	1658	242	873	287	744	0	0	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	567	1914	0	0	1692	247	891	293	759	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	145	0	12	12	0	0	0
Lane Group Flow (vph)	567	1914	0	0	1692	103	446	1105	368	0	0	0
Turn Type	Prot				Perm		Split	Perm				
Protected Phases	1	6			2		4	4				
Permitted Phases					2						4	
Actuated Green, G (s)	36.0	74.0			34.0	34.0	35.2	35.2	35.2			
Effective Green, g (s)	36.0	75.0			35.0	35.0	37.0	37.0	37.0			
Actuated g/C Ratio	0.30	0.62			0.29	0.29	0.31	0.31	0.31			
Clearance Time (s)	4.0	5.0			5.0	5.0	5.8	5.8	5.8			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	922	2844			1672	413	420	1162	376			
v/s Ratio Prot	0.18	c0.42			c0.30		c0.33	0.29				
v/s Ratio Perm					0.07						0.30	
v/c Ratio	0.61	0.67			1.01	0.25	1.06	0.98dl	0.98			
Uniform Delay, d1	36.1	14.6			42.5	32.5	41.5	40.6	41.1			
Progression Factor	0.81	0.92			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	0.3	0.4			25.0	1.4	61.3	16.0	40.4			
Delay (s)	29.7	13.8			67.5	33.9	102.8	56.7	81.5			
Level of Service	C	B			E	C	F	E	F			
Approach Delay (s)	17.4				63.2		72.1				0.0	
Approach LOS	B				E		E				A	

Intersection Summary

HCM Average Control Delay	48.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.9%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑		↑↑	↑↑↑					↑	↑↑	↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.81		0.97	0.91					0.91	0.86	0.91
Frt		0.97		1.00	1.00					1.00	0.97	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6525		3072	4550					1441	2718	1289
Flt Permitted		1.00		0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6525		3072	4550					1441	2718	1289
Volume (vph)	0	1479	423	696	1829	0	0	0	0	968	283	601
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1509	432	710	1866	0	0	0	0	988	289	613
RTOR Reduction (vph)	0	43	0	0	0	0	0	0	0	0	14	14
Lane Group Flow (vph)	0	1898	0	710	1866	0	0	0	0	494	943	425
Turn Type				Prot						Split		Perm
Protected Phases		2		1	6					4	4	
Permitted Phases												4
Actuated Green, G (s)		40.3		30.5	75.3					35.0	35.0	35.0
Effective Green, g (s)		41.0		31.0	76.0					36.0	36.0	36.0
Actuated g/C Ratio		0.34		0.26	0.63					0.30	0.30	0.30
Clearance Time (s)		4.7		4.5	4.7					5.0	5.0	5.0
Vehicle Extension (s)		3.0		4.0	3.0					4.0	4.0	4.0
Lane Grp Cap (vph)		2229		794	2882					432	815	387
v/s Ratio Prot		c0.29		c0.23	0.41					0.34	c0.35	
v/s Ratio Perm												0.33
v/c Ratio		0.85		0.89	0.65					1.14	1.16	1.10
Uniform Delay, d1		36.7		42.9	13.7					42.0	42.0	42.0
Progression Factor		1.00		0.90	0.49					1.00	1.00	1.00
Incremental Delay, d2		4.4		1.4	0.1					88.7	84.3	74.9
Delay (s)		41.0		40.1	6.8					130.7	126.3	116.9
Level of Service		D		D	A					F	F	F
Approach Delay (s)		41.0			15.9			0.0			125.3	
Approach LOS		D			B			A			F	

Intersection Summary

HCM Average Control Delay	55.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	116.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	0.99		1.00	0.99			0.98			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.99			0.93			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1570	1606		1583	1641			1521			1619	
Flt Permitted	0.24	1.00		0.12	1.00			0.98			0.87	
Satd. Flow (perm)	394	1606		208	1641			1492			1419	
Volume (vph)	45	953	188	279	639	45	41	282	324	18	72	10
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	45	953	188	279	639	45	41	282	324	18	72	10
RTOR Reduction (vph)	0	12	0	0	4	0	0	60	0	0	7	0
Lane Group Flow (vph)	45	1129	0	279	680	0	0	587	0	0	93	0
Conf. Peds. (#/hr)	19		23	23		19	17		16	16		17
Conf. Bikes (#/hr)			9			39			2			10
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	6		2		2		8		8		4	
Permitted Phases	6		2		2		8		8		4	
Actuated Green, G (s)	32.0	32.0		32.0	32.0			20.0			20.0	
Effective Green, g (s)	32.0	32.0		32.0	32.0			20.0			20.0	
Actuated g/C Ratio	0.53	0.53		0.53	0.53			0.33			0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	210	857		111	875			497			473	
v/s Ratio Prot		0.70			0.41							
v/s Ratio Perm	0.11			c1.34				c0.39			0.07	
v/c Ratio	0.21	1.32		2.51	0.78			1.18			0.20	
Uniform Delay, d1	7.4	14.0		14.0	11.2			20.0			14.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	2.3	151.2		707.0	6.7			100.6			0.2	
Delay (s)	9.7	165.2		721.0	17.9			120.6			14.5	
Level of Service	A	F		F	B			F			B	
Approach Delay (s)		159.3			221.6			120.6			14.5	
Approach LOS		F			F			F			B	

Intersection Summary

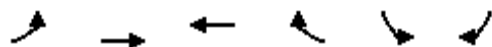
HCM Average Control Delay	166.4	HCM Level of Service	F
HCM Volume to Capacity ratio	2.00		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	142.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶		↶	↶		↶	↶	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4536		1583	4508		1583	1610		1583	1606	
Flt Permitted	0.06	1.00		0.12	1.00		0.33	1.00		0.53	1.00	
Satd. Flow (perm)	95	4536		203	4508		545	1610		889	1606	
Volume (vph)	68	1447	29	27	1861	123	101	116	34	171	190	62
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	74	1573	32	29	2023	134	110	126	37	186	207	67
RTOR Reduction (vph)	0	1	0	0	4	0	0	11	0	0	5	0
Lane Group Flow (vph)	74	1604	0	29	2153	0	110	152	0	186	269	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			2			4			4		
Permitted Phases	2			2			4			4		
Actuated Green, G (s)	83.6	83.6		83.6	83.6		27.0	27.0		27.0	27.0	
Effective Green, g (s)	84.0	84.0		84.0	84.0		28.0	28.0		28.0	28.0	
Actuated g/C Ratio	0.70	0.70		0.70	0.70		0.23	0.23		0.23	0.23	
Clearance Time (s)	4.4	4.4		4.4	4.4		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	67	3175		142	3156		127	376		207	375	
v/s Ratio Prot		0.35			0.48			0.09			0.17	
v/s Ratio Perm	c0.78			0.14			0.20			c0.21		
v/c Ratio	1.10	0.51		0.20	0.68		0.87	0.40		0.90	0.72	
Uniform Delay, d1	18.0	8.4		6.3	10.3		44.2	38.9		44.6	42.3	
Progression Factor	1.30	0.79		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	87.4	0.2		3.2	1.2		42.0	0.7		35.6	6.4	
Delay (s)	110.9	6.8		9.5	11.5		86.1	39.7		80.3	48.7	
Level of Service	F	A		A	B		F	D		F	D	
Approach Delay (s)		11.4			11.5			58.4			61.5	
Approach LOS		B			B			E			E	

Intersection Summary

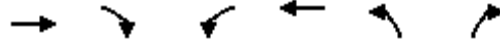
HCM Average Control Delay	19.3	HCM Level of Service	B
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑	↗	↖↗	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1583	4550	3167	1417	3072	1417
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1583	4550	3167	1417	3072	1417
Volume (vph)	277	1522	1203	717	669	286
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	298	1637	1294	771	719	308
RTOR Reduction (vph)	0	0	0	15	0	8
Lane Group Flow (vph)	298	1637	1294	756	719	300
Turn Type	Prot			pm+ov		pt+ov
Protected Phases	5	2	6	4	4	4 5
Permitted Phases				6		
Actuated Green, G (s)	12.5	41.1	37.6	66.5	28.9	45.0
Effective Green, g (s)	12.0	41.0	37.5	66.0	28.5	44.5
Actuated g/C Ratio	0.13	0.46	0.42	0.73	0.32	0.49
Clearance Time (s)	3.5	3.9	3.9	3.6	3.6	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	211	2073	1320	1102	973	701
v/s Ratio Prot	c0.19	c0.36	c0.41	c0.22	0.23	0.21
v/s Ratio Perm				0.32		
v/c Ratio	1.41	0.79	0.98	0.69	0.74	0.43
Uniform Delay, d1	39.0	20.8	25.9	6.4	27.4	14.6
Progression Factor	1.00	1.00	0.59	0.44	1.00	1.00
Incremental Delay, d2	211.2	3.2	4.2	0.2	3.0	0.4
Delay (s)	250.2	24.0	19.4	3.0	30.4	15.0
Level of Service	F	C	B	A	C	B
Approach Delay (s)		58.8	13.3		25.8	
Approach LOS		E	B		C	

Intersection Summary

HCM Average Control Delay	33.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3014		1509	3018	1426	
Flt Permitted	1.00		0.30	1.00	0.98	
Satd. Flow (perm)	3014		482	3018	1426	
Volume (vph)	857	8	32	1677	23	40
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	866	8	32	1694	23	40
RTOR Reduction (vph)	1	0	0	0	33	0
Lane Group Flow (vph)	873	0	32	1694	30	0
Turn Type			Perm			
Protected Phases	2			6	4	
Permitted Phases			6			
Actuated Green, G (s)	74.7		74.7	74.7	17.3	
Effective Green, g (s)	74.2		74.2	74.2	17.8	
Actuated g/C Ratio	0.74		0.74	0.74	0.18	
Clearance Time (s)	3.5		3.5	3.5	4.5	
Vehicle Extension (s)	0.2		0.2	0.2	3.0	
Lane Grp Cap (vph)	2236		358	2239	254	
v/s Ratio Prot	0.29			c0.56	c0.02	
v/s Ratio Perm			0.07			
v/c Ratio	0.39		0.09	0.76	0.12	
Uniform Delay, d1	4.7		3.6	7.6	34.5	
Progression Factor	2.83		0.36	0.34	1.00	
Incremental Delay, d2	0.0		0.3	1.7	0.2	
Delay (s)	13.3		1.6	4.2	34.7	
Level of Service	B		A	A	C	
Approach Delay (s)	13.3			4.2	34.7	
Approach LOS	B			A	C	

Intersection Summary

HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	EBR2	NBT	NBR	NBR2	SBL2	SBL	SBT	NWR2
Lane Configurations											
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0					4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95					0.95	1.00
Frt	1.00	1.00	0.85	0.85	0.95					1.00	0.86
Flt Protected	0.95	1.00	1.00	1.00	1.00					0.98	1.00
Satd. Flow (prot)	1583	3167	1417	1417	3003					3113	1442
Flt Permitted	0.95	1.00	1.00	1.00	1.00					0.63	1.00
Satd. Flow (perm)	1583	3167	1417	1417	3003					2003	1442
Volume (vph)	55	633	284	10	300	122	35	106	53	304	14
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	59	673	302	11	319	130	37	113	56	323	15
RTOR Reduction (vph)	0	0	0	11	6	0	0	0	0	0	0
Lane Group Flow (vph)	59	673	302	0	480	0	0	0	0	492	15
Turn Type	custom		Perm	Perm					Prot		Free
Protected Phases	3	3			6				2	1	
Permitted Phases	4	4	3	3						2	Free
Actuated Green, G (s)	25.0	25.0	5.0	5.0	22.5					34.9	100.0
Effective Green, g (s)	23.6	23.6	4.0	4.0	22.5					33.9	100.0
Actuated g/C Ratio	0.24	0.24	0.04	0.04	0.22					0.34	1.00
Clearance Time (s)	3.0	3.0	3.0	3.0	4.0					4.0	
Vehicle Extension (s)	1.0	1.0	1.0	1.0	3.0					4.0	
Lane Grp Cap (vph)	437	874	57	57	676					901	1442
v/s Ratio Prot	0.01	c0.03			c0.16					c0.11	
v/s Ratio Perm	0.03	0.18	c0.21	0.00						c0.08	0.01
v/c Ratio	0.14	0.77	5.30	0.01	0.71					0.55	0.01
Uniform Delay, d1	30.3	35.7	48.0	46.1	35.7					26.8	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00					0.28	1.00
Incremental Delay, d2	0.1	3.9	1972.4	0.0	6.2					2.2	0.0
Delay (s)	30.4	39.5	2020.4	46.1	42.0					9.7	0.0
Level of Service	C	D	F	D	D					A	A
Approach Delay (s)		611.5			42.0					9.7	
Approach LOS		F			D					A	

Intersection Summary

HCM Average Control Delay	325.9	HCM Level of Service	F
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶			↶↶	↶		↶↶	↶
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95	1.00		0.95	1.00
Frt	1.00	0.98		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.99	1.00
Satd. Flow (prot)	1583	4450		1583	4494			3138	1417		3148	1417
Flt Permitted	0.12	1.00		0.95	1.00			0.54	1.00		0.52	1.00
Satd. Flow (perm)	202	4450		1583	4494			1721	1417		1640	1417
Volume (vph)	491	1475	255	96	1405	125	198	882	133	95	715	80
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	517	1553	268	101	1479	132	208	928	140	100	753	84
RTOR Reduction (vph)	0	27	0	0	12	0	0	0	82	0	0	19
Lane Group Flow (vph)	517	1794	0	101	1599	0	0	1136	58	0	853	65
Turn Type	Perm		Prot		Perm		Perm	Perm	Perm	Perm		Perm
Protected Phases	6		5		2		8		4		4	
Permitted Phases	6						8		4		4	
Actuated Green, G (s)	41.0	41.0		5.0	50.0			31.5	31.5		31.5	31.5
Effective Green, g (s)	41.0	41.0		5.0	50.0			32.0	32.0		32.0	32.0
Actuated g/C Ratio	0.46	0.46		0.06	0.56			0.36	0.36		0.36	0.36
Clearance Time (s)	4.0	4.0		4.0	4.0			4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	92	2027		88	2497			612	504		583	504
v/s Ratio Prot		0.40		c0.06	0.36							
v/s Ratio Perm	c2.56							c0.66	0.04		0.52	0.05
v/c Ratio	5.62	0.89		1.15	0.64			2.04dl	0.11		1.46	0.13
Uniform Delay, d1	24.5	22.4		42.5	13.8			29.0	19.5		29.0	19.6
Progression Factor	1.52	1.56		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	2089.3	2.9		141.3	1.3			391.6	0.5		217.7	0.5
Delay (s)	2126.5	37.8		183.8	15.1			420.6	19.9		246.7	20.1
Level of Service	F	D		F	B			F	B		F	C
Approach Delay (s)	499.6			25.0				376.6			226.4	
Approach LOS	F			C				F			F	

Intersection Summary

HCM Average Control Delay	304.0	HCM Level of Service	F
HCM Volume to Capacity ratio	3.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	136.0%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
2: 6th St & Western Ave

2/23/2010

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕			↕↕	↕↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0			4.0			4.0	4.0
Lane Util. Factor		0.95			0.95			0.95			0.95	1.00
Frbp, ped/bikes		0.99			0.96			0.99			1.00	0.75
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		0.99			0.98			0.99			1.00	0.85
Flt Protected		1.00			1.00			1.00			1.00	1.00
Satd. Flow (prot)		3117			2963			3106			3167	1066
Flt Permitted		1.00			1.00			1.00			1.00	1.00
Satd. Flow (perm)		3117			2963			3106			3167	1066
Volume (vph)	0	1222	76	0	1192	198	0	1481	97	0	1750	111
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	1273	79	0	1242	206	0	1543	101	0	1823	116
RTOR Reduction (vph)	0	1	0	0	3	0	0	5	0	0	0	6
Lane Group Flow (vph)	0	1351	0	0	1445	0	0	1639	0	0	1823	110
Conf. Peds. (#/hr)	136		73	73		136	120		104	120		104
Conf. Bikes (#/hr)			5			7			19			15
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)		40.2			40.2			40.2			40.2	40.2
Effective Green, g (s)		41.0			41.0			41.0			41.0	41.0
Actuated g/C Ratio		0.46			0.46			0.46			0.46	0.46
Clearance Time (s)		4.8			4.8			4.8			4.8	4.8
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1420			1350			1415			1443	486
v/s Ratio Prot		0.43			c0.49			0.53			c0.58	
v/s Ratio Perm												0.10
v/c Ratio		0.95			1.07			1.16			1.26	0.23
Uniform Delay, d1		23.5			24.5			24.5			24.5	14.9
Progression Factor		1.00			1.00			0.60			1.00	1.00
Incremental Delay, d2		14.8			45.8			71.9			124.2	1.1
Delay (s)		38.3			70.3			86.6			148.7	16.0
Level of Service		D			E			F			F	B
Approach Delay (s)		38.3			70.3			86.6			140.8	
Approach LOS		D			E			F			F	
Intersection Summary												
HCM Average Control Delay			89.1									F
HCM Volume to Capacity ratio			1.17									
Actuated Cycle Length (s)			90.0								8.0	
Intersection Capacity Utilization			121.9%									H
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕		↖	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.97		1.00	0.96		1.00	0.93		1.00	0.89	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4335		1583	4297		1583	2880		1583	2689	
Flt Permitted	0.13	1.00		0.13	1.00		0.13	1.00		0.13	1.00	
Satd. Flow (perm)	220	4335		220	4297		224	2880		213	2689	
Volume (vph)	257	1258	128	125	1557	168	105	1447	292	114	1025	449
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	279	1367	139	136	1692	183	114	1573	317	124	1114	488
RTOR Reduction (vph)	0	14	0	0	15	0	0	19	0	0	53	0
Lane Group Flow (vph)	279	1492	0	136	1860	0	114	1871	0	124	1549	0
Conf. Peds. (#/hr)	663		371	371		663	453		618	618		453
Conf. Bikes (#/hr)			12			12			20			20
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	34.9	28.9		34.9	28.9		35.0	28.6		38.0	30.1	
Effective Green, g (s)	36.3	30.3		36.3	30.3		36.2	29.8		39.2	31.3	
Actuated g/C Ratio	0.40	0.34		0.40	0.34		0.40	0.33		0.44	0.35	
Clearance Time (s)	4.0	5.4		4.0	5.4		4.0	5.2		4.0	5.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	180	1459		180	1447		187	954		213	935	
v/s Ratio Prot	c0.10	0.34		0.05	0.43		0.04	c0.65		c0.05	0.58	
v/s Ratio Perm	c0.52			0.25			0.20			0.20		
v/c Ratio	1.55	1.02		0.76	1.29		0.61	1.96		0.58	1.66	
Uniform Delay, d1	25.5	29.8		20.8	29.8		22.3	30.1		21.0	29.4	
Progression Factor	1.85	0.90		0.76	0.81		0.84	1.04		1.73	1.62	
Incremental Delay, d2	254.7	18.4		12.4	132.5		2.7	434.5		0.4	296.0	
Delay (s)	301.9	45.3		28.2	156.6		21.5	465.9		36.8	343.7	
Level of Service	F	D		C	F		C	F		D	F	
Approach Delay (s)		85.4			147.9			440.6			321.6	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	250.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	132.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3134		1583	3118		1583	3165		1583	3153	
Flt Permitted	0.26	1.00		0.32	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	437	3134		526	3118		163	3165		163	3153	
Volume (vph)	51	594	44	95	665	75	62	1460	5	107	1499	45
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	54	632	47	101	707	80	66	1553	5	114	1595	48
RTOR Reduction (vph)	0	5	0	0	5	0	0	0	0	0	2	0
Lane Group Flow (vph)	54	674	0	101	782	0	66	1558	0	114	1641	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	8			4			6			2		
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	40.4	40.4		40.4	40.4		40.3	40.3		40.3	40.3	
Effective Green, g (s)	41.0	41.0		41.0	41.0		41.0	41.0		41.0	41.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46		0.46	0.46		0.46	0.46	
Clearance Time (s)	4.6	4.6		4.6	4.6		4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	199	1428		240	1420		74	1442		74	1436	
v/s Ratio Prot		0.22			c0.25			0.49			0.52	
v/s Ratio Perm	0.12			0.19			0.41			c0.70		
v/c Ratio	0.27	0.47		0.42	0.55		0.89	1.08		1.54	1.14	
Uniform Delay, d1	15.2	17.0		16.5	17.8		22.5	24.5		24.5	24.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.46	0.48	
Incremental Delay, d2	3.3	1.1		5.3	1.5		77.4	48.7		249.3	65.1	
Delay (s)	18.6	18.1		21.8	19.3		99.9	73.2		260.6	76.8	
Level of Service	B	B		C	B		F	E		F	E	
Approach Delay (s)		18.1			19.6			74.3			88.7	
Approach LOS		B			B			E			F	

Intersection Summary

HCM Average Control Delay	61.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗		↗	↗↗	↗	↗	↗↗	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4537		1583	4483		1583	3167	1417	1583	3167	1417
Flt Permitted	0.12	1.00		0.12	1.00		0.12	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	196	4537		196	4483		194	3167	1417	194	3167	1417
Volume (vph)	113	2068	41	115	1536	168	192	1218	67	181	1300	155
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	114	2089	41	116	1552	170	194	1230	68	183	1313	157
RTOR Reduction (vph)	0	2	0	0	13	0	0	0	17	0	0	16
Lane Group Flow (vph)	114	2128	0	116	1709	0	194	1230	51	183	1313	141
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases	6			2			8		8	4		4
Actuated Green, G (s)	40.7	33.0		40.7	33.0		41.3	33.3	41.0	41.3	33.3	41.0
Effective Green, g (s)	41.7	34.0		41.7	34.0		42.3	34.3	42.0	42.3	34.3	42.0
Actuated g/C Ratio	0.42	0.34		0.42	0.34		0.42	0.34	0.42	0.42	0.34	0.42
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	189	1543		189	1524		193	1086	652	193	1086	652
v/s Ratio Prot	0.05	c0.47		c0.05	0.38		c0.08	0.39	0.01	0.08	c0.41	0.02
v/s Ratio Perm	0.21			0.21			0.34		0.03	0.32		0.08
v/c Ratio	0.60	1.38		0.61	1.12		1.01	1.13	0.08	0.95	1.21	0.22
Uniform Delay, d1	23.5	33.0		24.1	33.0		48.2	32.9	17.4	24.5	32.9	18.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.3	174.8		5.8	63.9		66.1	71.5	0.1	49.4	102.8	0.2
Delay (s)	28.9	207.8		29.9	96.9		114.3	104.3	17.4	73.9	135.7	18.7
Level of Service	C	F		C	F		F	F	B	E	F	B
Approach Delay (s)		198.7			92.7			101.7			117.7	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	133.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	118.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕		↖	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4515		1583	4514		1583	3132		1583	3113	
Flt Permitted	0.09	1.00		0.09	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	145	4515		145	4514		185	3132		185	3113	
Volume (vph)	270	2082	113	112	1809	101	76	1195	95	85	1483	190
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	276	2124	115	114	1846	103	78	1219	97	87	1513	194
RTOR Reduction (vph)	0	3	0	0	7	0	0	2	0	0	4	0
Lane Group Flow (vph)	276	2236	0	114	1942	0	78	1314	0	87	1703	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	6			2			8			4		
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	45.5	45.5		45.5	45.5		35.5	35.5		35.5	35.5	
Effective Green, g (s)	46.0	46.0		46.0	46.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.40	0.40		0.40	0.40	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	2308		74	2307		74	1253		74	1245	
v/s Ratio Prot		0.50			0.43			0.42			c0.55	
v/s Ratio Perm	c1.90			0.79			0.42			0.47		
v/c Ratio	3.73	0.97		1.54	0.84		1.05	1.05		1.18	1.37	
Uniform Delay, d1	22.0	21.3		22.0	18.9		27.0	27.0		27.0	27.0	
Progression Factor	1.26	1.30		1.13	1.14		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1250.2	9.6		249.3	0.4		120.3	39.3		159.7	170.7	
Delay (s)	1277.9	37.3		274.2	22.0		147.3	66.3		186.7	197.7	
Level of Service	F	D		F	C		F	E		F	F	
Approach Delay (s)		173.5			35.9			70.8			197.1	
Approach LOS		F			D			E			F	

Intersection Summary

HCM Average Control Delay	124.0	HCM Level of Service	F
HCM Volume to Capacity ratio	2.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	132.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↑	↗		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)	1583	4534		1583	4538			1644	1417		1545	
Flt Permitted	0.07	1.00		0.06	1.00			0.89	1.00		0.91	
Satd. Flow (perm)	115	4534		98	4538			1491	1417		1422	
Volume (vph)	61	2282	53	80	1896	35	27	69	79	28	36	54
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	2480	58	87	2061	38	29	75	86	30	39	59
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	3	0	7	0
Lane Group Flow (vph)	66	2537	0	87	2098	0	0	104	83	0	121	0
Turn Type	Perm			Perm			Perm			Perm	Perm	
Protected Phases	6			2			8			8		4
Permitted Phases	6			2			8			8		4
Actuated Green, G (s)	67.7	67.7		67.7	67.7			13.8	13.8		13.8	
Effective Green, g (s)	67.7	67.7		67.7	67.7			14.3	14.3		14.3	
Actuated g/C Ratio	0.75	0.75		0.75	0.75			0.16	0.16		0.16	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.5	4.5		4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	87	3411		74	3414			237	225		226	
v/s Ratio Prot		0.56			0.46							
v/s Ratio Perm	0.57			c0.88				0.07	0.06		c0.09	
v/c Ratio	0.76	0.74		1.18	0.61			0.44	0.37		0.54	
Uniform Delay, d1	6.4	6.3		11.1	5.1			34.2	33.8		34.8	
Progression Factor	1.00	1.00		1.24	0.90			1.00	1.00		1.00	
Incremental Delay, d2	45.8	1.5		126.4	0.4			1.3	1.0		2.4	
Delay (s)	52.2	7.8		140.3	5.0			35.5	34.9		37.2	
Level of Service	D	A		F	A			D	C		D	
Approach Delay (s)		8.9			10.4			35.2			37.2	
Approach LOS		A			B			D			D	

Intersection Summary

HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵↵↵	↵
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.91
Frbp, ped/bikes	0.96		1.00	1.00	0.98	0.96
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	0.95	0.85
Flt Protected	1.00		0.95	1.00	0.97	1.00
Satd. Flow (prot)	4234		1583	4550	2902	1239
Flt Permitted	1.00		0.09	1.00	0.97	1.00
Satd. Flow (perm)	4234		148	4550	2902	1239
Volume (vph)	1785	463	605	1460	560	726
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1821	472	617	1490	571	741
RTOR Reduction (vph)	50	0	0	0	95	1
Lane Group Flow (vph)	2243	0	617	1490	798	418
Conf. Peds. (#/hr)		184	184			21
Conf. Bikes (#/hr)		4				5
Turn Type			pm+pt		pm+ov	
Protected Phases	6		5	2	4	5
Permitted Phases			2			4
Actuated Green, G (s)	40.0		52.0	52.0	28.3	36.3
Effective Green, g (s)	41.0		53.0	53.0	29.0	37.0
Actuated g/C Ratio	0.46		0.59	0.59	0.32	0.41
Clearance Time (s)	5.0		4.0	5.0	4.7	4.0
Vehicle Extension (s)	3.0		2.0	3.0	2.0	2.0
Lane Grp Cap (vph)	1929		215	2679	935	564
v/s Ratio Prot	0.53		c0.26	0.33	c0.27	0.07
v/s Ratio Perm			c1.44			0.27
v/c Ratio	1.16		2.87	0.56	0.85	0.74
Uniform Delay, d1	24.5		26.5	11.3	28.5	22.5
Progression Factor	1.00		1.00	1.00	0.67	0.33
Incremental Delay, d2	79.4		854.1	0.8	5.3	3.2
Delay (s)	103.9		880.6	12.1	24.5	10.5
Level of Service	F		F	B	C	B
Approach Delay (s)	103.9			266.4	20.0	
Approach LOS	F			F	C	
Intersection Summary						
HCM Average Control Delay		144.6		HCM Level of Service		F
HCM Volume to Capacity ratio		2.11				
Actuated Cycle Length (s)		90.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization		126.1%		ICU Level of Service		H
Analysis Period (min)		15				
c Critical Lane Group						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3074		1583	1667	1417	1583	3115		1583	3163	
Flt Permitted	0.45	1.00		0.36	1.00	1.00	0.23	1.00		0.12	1.00	
Satd. Flow (perm)	757	3074		606	1667	1417	376	3115		194	3163	
Volume (vph)	20	382	92	172	253	59	171	1243	151	20	992	7
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	20	390	94	176	258	60	174	1268	154	20	1012	7
RTOR Reduction (vph)	0	0	0	0	0	42	0	11	0	0	0	0
Lane Group Flow (vph)	20	484	0	176	258	18	174	1412	0	20	1019	0
Turn Type	Perm			Perm			Perm	Perm		Perm		
Protected Phases	8			4			6	6		2		
Permitted Phases	8			4			6	6		2		
Actuated Green, G (s)	26.4	26.4		26.4	26.4	26.4	54.3	54.3		54.3	54.3	
Effective Green, g (s)	27.0	27.0		27.0	27.0	27.0	55.0	55.0		55.0	55.0	
Actuated g/C Ratio	0.30	0.30		0.30	0.30	0.30	0.61	0.61		0.61	0.61	
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	227	922		182	500	425	230	1904		119	1933	
v/s Ratio Prot		0.16			0.15			0.45			0.32	
v/s Ratio Perm	0.03			c0.29		0.01	c0.46			0.10		
v/c Ratio	0.09	0.52		0.97	0.52	0.04	0.76	0.74		0.17	0.53	
Uniform Delay, d1	22.6	26.2		31.1	26.1	22.3	12.7	12.4		7.6	10.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.62	1.73		0.35	0.48	
Incremental Delay, d2	0.8	2.1		58.6	3.8	0.2	2.1	0.2		0.3	0.1	
Delay (s)	23.4	28.3		89.7	29.9	22.5	22.7	21.8		2.9	4.9	
Level of Service	C	C		F	C	C	C	C		A	A	
Approach Delay (s)		28.1			50.3			21.9			4.8	
Approach LOS		C			D			C			A	

Intersection Summary

HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↗↖		↖	↗↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4497		1583	4521		1583	3129		1583	3167	1417
Flt Permitted	0.14	1.00		0.95	1.00		0.12	1.00		0.13	1.00	1.00
Satd. Flow (perm)	236	4497		1583	4521		208	3129		219	3167	1417
Volume (vph)	63	2256	190	68	1687	74	109	1427	122	70	1235	108
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	66	2375	200	72	1776	78	115	1502	128	74	1300	114
RTOR Reduction (vph)	0	10	0	0	5	0	0	6	0	0	0	68
Lane Group Flow (vph)	66	2565	0	72	1849	0	115	1624	0	74	1300	46
Turn Type	pm+pt		Prot		pm+pt		pm+pt		pm+pt		Perm	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2					4				8		8
Actuated Green, G (s)	32.7	27.4		7.9	29.1		38.8	31.0		35.8	29.5	29.5
Effective Green, g (s)	34.0	28.3		7.4	30.0		39.8	32.0		36.8	30.5	30.5
Actuated g/C Ratio	0.38	0.31		0.08	0.33		0.44	0.36		0.41	0.34	0.34
Clearance Time (s)	4.4	4.9		3.5	4.9		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	174	1414		130	1507		211	1113		185	1073	480
v/s Ratio Prot	0.02	c0.57		c0.05	0.41		c0.05	c0.52		0.03	0.41	
v/s Ratio Perm	0.12					0.19				0.14		0.03
v/c Ratio	0.38	1.81		0.55	1.23		0.55	1.46		0.40	1.21	0.10
Uniform Delay, d1	22.6	30.9		39.7	30.0		20.8	29.0		21.7	29.8	20.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.96	0.81	0.81
Incremental Delay, d2	1.4	369.0		5.0	108.1		2.9	211.4		1.2	103.0	0.3
Delay (s)	24.0	399.9		44.7	138.1		23.6	240.4		22.0	127.1	16.8
Level of Service	C	F		D	F		C	F		C	F	B
Approach Delay (s)	390.5			134.6			226.2			113.4		
Approach LOS	F			F			F			F		

Intersection Summary

HCM Average Control Delay	237.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	123.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↑	↗		↖	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.99	1.00
Satd. Flow (prot)	1583	4517		1583	4534			1643	1417		1649	1417
Flt Permitted	0.09	1.00		0.09	1.00			0.99	1.00		0.99	1.00
Satd. Flow (perm)	147	4517		147	4534			1643	1417		1649	1417
Volume (vph)	80	2032	104	6	1869	44	80	196	42	63	228	33
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	88	2233	114	7	2054	48	88	215	46	69	251	36
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	36	0	0	31
Lane Group Flow (vph)	88	2347	0	7	2100	0	0	303	10	0	320	5
Turn Type	Perm		Perm		Split		Perm		Split		Perm	
Protected Phases	6		2		4		4		3		3	
Permitted Phases	6		2				4				3	
Actuated Green, G (s)	43.6	43.6		43.6	43.6			19.0	19.0		10.5	10.5
Effective Green, g (s)	45.5	45.5		45.5	45.5			20.5	20.5		12.0	12.0
Actuated g/C Ratio	0.51	0.51		0.51	0.51			0.23	0.23		0.13	0.13
Clearance Time (s)	5.9	5.9		5.9	5.9			5.5	5.5		5.5	5.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	74	2284		74	2292			374	323		220	189
v/s Ratio Prot		0.52			0.46			c0.18			c0.19	
v/s Ratio Perm	c0.60			0.05					0.01			0.00
v/c Ratio	1.19	1.03		0.09	0.92			0.81	0.03		1.45	0.03
Uniform Delay, d1	22.2	22.2		11.6	20.5			32.9	27.0		39.0	33.9
Progression Factor	0.72	0.73		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	156.5	24.9		2.5	7.2			12.5	0.0		228.0	0.1
Delay (s)	172.5	41.1		14.1	27.7			45.4	27.1		267.0	34.0
Level of Service	F	D		B	C			D	C		F	C
Approach Delay (s)		45.9			27.6			43.0			243.5	
Approach LOS		D			C			D			F	

Intersection Summary			
HCM Average Control Delay	51.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕			↕			↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			1.00			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.98	1.00
Satd. Flow (prot)	1583	4541		1583	4542			1657			1634	1417
Flt Permitted	0.13	1.00		0.07	1.00			1.00			0.98	1.00
Satd. Flow (perm)	214	4541		121	4542			1657			1634	1417
Volume (vph)	207	1794	23	23	1425	17	4	250	10	22	33	218
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	216	1869	24	24	1484	18	4	260	10	23	34	227
RTOR Reduction (vph)	0	1	0	0	1	0	0	2	0	0	0	187
Lane Group Flow (vph)	216	1892	0	24	1501	0	0	272	0	0	57	40
Turn Type	Perm		Perm		Split		Split		Split		Perm	
Protected Phases	6		2		3		3		4		4	
Permitted Phases	6		2								4	
Actuated Green, G (s)	53.6	53.6		53.6	53.6			9.6			10.9	10.9
Effective Green, g (s)	55.1	55.1		55.1	55.1			11.0			11.9	11.9
Actuated g/C Ratio	0.61	0.61		0.61	0.61			0.12			0.13	0.13
Clearance Time (s)	5.5	5.5		5.5	5.5			5.4			5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	131	2780		74	2781			203			216	187
v/s Ratio Prot		0.42			0.33			c0.16			c0.03	
v/s Ratio Perm	c1.01			0.20								0.03
v/c Ratio	1.65	0.68		0.32	0.54			1.34			0.26	0.22
Uniform Delay, d1	17.4	11.6		8.4	10.1			39.5			35.1	34.9
Progression Factor	1.00	1.00		1.45	1.56			1.00			1.00	1.00
Incremental Delay, d2	323.5	1.4		4.8	0.3			182.8			0.7	0.6
Delay (s)	341.0	13.0		17.1	16.1			222.3			35.8	35.5
Level of Service	F	B		B	B			F			D	D
Approach Delay (s)		46.6			16.1			222.3			35.5	
Approach LOS		D			B			F			D	

Intersection Summary

HCM Average Control Delay	46.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: Wilshire Blvd & Sycamore Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↑	↑↑↑			↑			↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00	
Frbp, ped/bikes		0.99		1.00	1.00			0.98			0.98	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.99		1.00	1.00			0.94			0.93	
Flt Protected		1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		4229		1484	4267			1434			1429	
Flt Permitted		1.00		0.06	1.00			0.95			0.98	
Satd. Flow (perm)		4229		100	4267			1372			1404	
Volume (vph)	0	1908	72	45	1602	22	29	91	95	10	61	76
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	2097	79	49	1760	24	32	100	104	11	67	84
RTOR Reduction (vph)	0	3	0	0	1	0	0	4	0	0	11	0
Lane Group Flow (vph)	0	2173	0	49	1783	0	0	232	0	0	151	0
Confl. Peds. (#/hr)	34		71	71		34	15		9	9		15
Confl. Bikes (#/hr)			8			12			4			2
Turn Type				Perm			Perm			Perm		
Protected Phases		6			2			8			4	
Permitted Phases				2			8			4		
Actuated Green, G (s)		63.1		63.1	63.1			19.4			19.4	
Effective Green, g (s)		62.6		62.6	62.6			19.4			19.4	
Actuated g/C Ratio		0.70		0.70	0.70			0.22			0.22	
Clearance Time (s)		3.5		3.5	3.5			4.0			4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		2942		70	2968			296			303	
v/s Ratio Prot		c0.51			0.42							
v/s Ratio Perm				0.49				c0.17			0.11	
v/c Ratio		0.74		0.70	0.60			0.78			0.50	
Uniform Delay, d1		8.6		8.1	7.2			33.3			31.0	
Progression Factor		0.98		1.00	1.00			1.00			1.00	
Incremental Delay, d2		0.2		45.0	0.9			12.7			1.3	
Delay (s)		8.5		53.1	8.1			46.1			32.3	
Level of Service		A		D	A			D			C	
Approach Delay (s)		8.5			9.3			46.1			32.3	
Approach LOS		A			A			D			C	
Intersection Summary												
HCM Average Control Delay			11.7									HCM Level of Service B
HCM Volume to Capacity ratio			0.75									
Actuated Cycle Length (s)			90.0									Sum of lost time (s) 8.0
Intersection Capacity Utilization			76.6%									ICU Level of Service D
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑↑	↔	↔	↑↑		↔	↑↑↑		↔	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2980	1333	1490	2952		1490	4247		1490	4236	
Flt Permitted	0.13	1.00	1.00	0.12	1.00		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	202	2980	1333	194	2952		216	4247		216	4236	
Volume (vph)	89	1519	102	116	1327	90	123	2179	126	153	2151	166
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	92	1566	105	120	1368	93	127	2246	130	158	2218	171
RTOR Reduction (vph)	0	0	36	0	5	0	0	7	0	0	9	0
Lane Group Flow (vph)	92	1566	69	120	1456	0	127	2369	0	158	2380	0
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases	8		8	4			6			2		
Actuated Green, G (s)	35.6	30.0	37.0	38.4	31.4		35.0	28.0		35.0	28.0	
Effective Green, g (s)	36.6	31.0	38.0	39.4	32.4		36.0	29.0		36.0	29.0	
Actuated g/C Ratio	0.41	0.34	0.42	0.44	0.36		0.40	0.32		0.40	0.32	
Clearance Time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	4.8	3.0	3.0	4.6		3.0	4.3		3.0	5.5	
Lane Grp Cap (vph)	162	1026	622	186	1063		185	1368		185	1365	
v/s Ratio Prot	0.04	c0.53	0.01	c0.05	0.49		0.05	0.56		c0.07	c0.56	
v/s Ratio Perm	0.19		0.04	0.23			0.22			0.27		
v/c Ratio	0.57	1.53	0.11	0.65	1.37		0.69	1.73		0.85	1.74	
Uniform Delay, d1	22.2	29.5	15.8	41.6	28.8		41.8	30.5		42.8	30.5	
Progression Factor	0.74	0.71	0.65	1.00	1.00		1.65	1.44		1.70	1.44	
Incremental Delay, d2	0.4	237.3	0.0	7.5	172.4		1.0	329.6		3.7	334.7	
Delay (s)	16.8	258.2	10.3	49.1	201.2		70.2	373.6		76.4	378.5	
Level of Service	B	F	B	D	F		E	F		E	F	
Approach Delay (s)		230.9			189.6			358.2			359.8	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	300.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.46		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	134.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2980	1333	1490	2918		1490	4223		1490	4281	
Flt Permitted	0.15	1.00	1.00	0.22	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	233	2980	1333	348	2918		165	4223		165	4281	
Volume (vph)	5	755	98	163	1028	166	167	2104	215	97	2150	5
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	5	763	99	165	1038	168	169	2125	217	98	2172	5
RTOR Reduction (vph)	0	0	19	0	1	0	0	13	0	0	0	0
Lane Group Flow (vph)	5	763	80	165	1205	0	169	2329	0	98	2177	0
Turn Type	Perm		Perm	pm+pt		Perm		Perm		Perm		
Protected Phases		8		7	4		6		6		2	
Permitted Phases	8		8	4		6		2				
Actuated Green, G (s)	35.0	35.0	35.0	43.0	43.0	37.0	37.0	37.0	37.0	37.0	37.0	
Effective Green, g (s)	36.0	36.0	36.0	44.0	44.0	38.0	38.0	38.0	38.0	38.0	38.0	
Actuated g/C Ratio	0.40	0.40	0.40	0.49	0.49	0.42	0.42	0.42	0.42	0.42	0.42	
Clearance Time (s)	5.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	93	1192	533	221	1427	70	1783		70	1808		
v/s Ratio Prot		0.26		0.03	c0.41		0.55			0.51		
v/s Ratio Perm	0.02		0.06	0.33		c1.02		0.59				
v/c Ratio	0.05	0.64	0.15	0.75	0.84	2.41	1.31	1.40	1.20			
Uniform Delay, d1	16.6	21.8	17.2	18.8	20.0	26.0	26.0	26.0	26.0			
Progression Factor	1.38	1.43	1.65	1.00	1.00	1.00	1.00	0.34	0.35			
Incremental Delay, d2	0.1	0.2	0.1	12.9	6.3	677.7	141.9	187.8	92.4			
Delay (s)	23.0	31.5	28.4	31.6	26.3	703.7	167.9	196.6	101.4			
Level of Service	C	C	C	C	C	F	F	F	F			
Approach Delay (s)		31.1			27.0		204.0		105.5			
Approach LOS		C			C		F		F			

Intersection Summary

HCM Average Control Delay	116.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	124.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕↕		↕	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.91		1.00	0.91	
Frt		0.99			0.98		1.00	1.00		1.00	1.00	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2954			2921		1490	4280		1490	4266	
Flt Permitted		1.00			1.00		0.19	1.00		0.19	1.00	
Satd. Flow (perm)		2954			2921		302	4280		302	4266	
Volume (vph)	0	1255	77	0	987	151	71	2357	10	100	2206	59
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1281	79	0	1007	154	72	2405	10	102	2251	60
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	5	0
Lane Group Flow (vph)	0	1360	0	0	1161	0	72	2414	0	102	2306	0
Turn Type		Perm		Perm		Perm		Perm		Perm		
Protected Phases		8		4		4		6		6		2
Permitted Phases		8		4		4		6		6		2
Actuated Green, G (s)		30.3			30.3		20.1	20.1		20.1	20.1	
Effective Green, g (s)		31.2			31.2		20.8	20.8		20.8	20.8	
Actuated g/C Ratio		0.52			0.52		0.35	0.35		0.35	0.35	
Clearance Time (s)		4.9			4.9		4.7	4.7		4.7	4.7	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1536			1519		105	1484		105	1479	
v/s Ratio Prot		c0.46			0.40			c0.56			0.54	
v/s Ratio Perm							0.24			0.34		
v/c Ratio		0.89			0.76		0.69	1.63		0.97	1.56	
Uniform Delay, d1		12.8			11.5		16.8	19.6		19.3	19.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		6.5			2.3		30.7	285.2		80.4	255.1	
Delay (s)		19.3			13.8		47.5	304.8		99.7	274.7	
Level of Service		B			B		D	F		F	F	
Approach Delay (s)		19.3			13.8			297.4			267.3	
Approach LOS		B			B			F			F	

Intersection Summary

HCM Average Control Delay	192.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑↑		↗	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.99		1.00	0.98		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1489	4172		1490	4161		1490	4263		1490	4199	
Flt Permitted	0.14	1.00		0.13	1.00		0.13	1.00		0.95	1.00	
Satd. Flow (perm)	216	4172		202	4161		202	4263		1490	4199	
Volume (vph)	149	1746	145	228	1350	129	143	2058	35	153	1944	116
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	152	1782	148	233	1378	132	146	2100	36	156	1984	118
RTOR Reduction (vph)	0	11	0	0	12	0	0	2	0	0	7	0
Lane Group Flow (vph)	152	1919	0	233	1498	0	146	2134	0	156	2095	0
Conf. Peds. (#/hr)	145		153	153		145	164		89	89		164
Conf. Bikes (#/hr)			13			8			6			17
Turn Type	pm+pt			pm+pt			pm+pt			Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8					
Actuated Green, G (s)	34.5	29.0		38.5	31.0		38.5	31.0		7.5	31.0	
Effective Green, g (s)	34.0	29.0		38.0	31.0		38.0	31.0		7.0	31.0	
Actuated g/C Ratio	0.38	0.32		0.42	0.34		0.42	0.34		0.08	0.34	
Clearance Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	152	1344		185	1433		185	1468		116	1446	
v/s Ratio Prot	0.06	c0.46		c0.10	0.36		0.06	c0.50		c0.10	0.50	
v/s Ratio Perm	0.32			0.43			0.27					
v/c Ratio	1.00	1.43		1.26	1.05		0.79	1.45		1.34	1.45	
Uniform Delay, d1	25.8	30.5		43.7	29.5		42.4	29.5		41.5	29.5	
Progression Factor	1.12	0.79		1.54	0.79		2.07	1.17		1.00	1.00	
Incremental Delay, d2	54.1	195.0		146.9	34.1		2.1	204.5		201.7	205.8	
Delay (s)	83.1	219.2		214.0	57.4		90.0	239.0		243.2	235.3	
Level of Service	F	F		F	E		F	F		F	F	
Approach Delay (s)		209.3			78.4			229.5			235.9	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	194.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	131.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕↕		↕	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.98		1.00	1.00		1.00	1.00	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1506			1508		1490	4264		1490	4254	
Flt Permitted		0.98			0.76		0.09	1.00		0.09	1.00	
Satd. Flow (perm)		1480			1153		143	4264		143	4254	
Volume (vph)	24	420	135	62	171	48	18	2147	38	19	2263	46
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	24	429	138	63	174	49	18	2191	39	19	2309	47
RTOR Reduction (vph)	0	1	0	0	1	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	590	0	0	285	0	18	2228	0	19	2354	0
Confl. Peds. (#/hr)	10		12	12		10	57		25	25		57
Confl. Bikes (#/hr)			2						1			15
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		37.2			37.2		43.3	43.3		43.3	43.3	
Effective Green, g (s)		38.2			38.2		43.8	43.8		43.8	43.8	
Actuated g/C Ratio		0.42			0.42		0.49	0.49		0.49	0.49	
Clearance Time (s)		5.0			5.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		628			489		70	2075		70	2070	
v/s Ratio Prot								0.52			c0.55	
v/s Ratio Perm		c0.40			0.25		0.13			0.13		
v/c Ratio		0.94			0.58		0.26	1.07		0.27	1.14	
Uniform Delay, d1		24.8			19.8		13.6	23.1		13.7	23.1	
Progression Factor		1.00			1.00		1.00	1.00		0.47	0.66	
Incremental Delay, d2		22.3			1.8		8.7	42.9		0.9	62.4	
Delay (s)		47.1			21.6		22.2	66.0		7.3	77.6	
Level of Service		D			C		C	E		A	E	
Approach Delay (s)		47.1			21.6			65.7			77.1	
Approach LOS		D			C			E			E	
Intersection Summary												
HCM Average Control Delay			66.3				HCM Level of Service			E		
HCM Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		8.0			
Intersection Capacity Utilization			106.7%				ICU Level of Service		G			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑↑		↖	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	4271		1490	4234		1490	4269		1490	4240	
Flt Permitted	0.12	1.00		0.11	1.00		0.95	1.00		0.11	1.00	
Satd. Flow (perm)	193	4271		171	4234		1490	4269		176	4240	
Volume (vph)	278	1932	34	55	1302	107	43	2163	45	182	2304	162
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	287	1992	35	57	1342	110	44	2230	46	188	2375	167
RTOR Reduction (vph)	0	2	0	0	10	0	0	2	0	0	7	0
Lane Group Flow (vph)	287	2025	0	57	1442	0	44	2274	0	188	2535	0
Turn Type	Perm		pm+pt			Prot		pm+pt				
Protected Phases	8		7		4		5		6			
Permitted Phases	8		4					2		6		
Actuated Green, G (s)	31.4	31.4	42.0		42.0	5.9		30.2	47.2		37.3	
Effective Green, g (s)	32.8	32.8	43.4		43.4	5.9		31.6	48.6		38.7	
Actuated g/C Ratio	0.33	0.33	0.43		0.43	0.06		0.32	0.49		0.39	
Clearance Time (s)	5.4	5.4	4.0		5.4	4.0		5.4	4.0		5.4	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	4.0		3.0	
Lane Grp Cap (vph)	63	1401	161		1838	88		1349	256		1641	
v/s Ratio Prot	0.47		0.02		c0.34	0.03		c0.10 c0.60				
v/s Ratio Perm	c1.49		0.13			c0.53		0.26				
v/c Ratio	4.56	1.45	0.35		0.78	0.50		1.69	0.73		1.54	
Uniform Delay, d1	33.6	33.6	23.4		24.3	45.6		34.2	43.3		30.6	
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	1635.8	204.5	1.3		3.4	4.4		311.8	11.1		248.3	
Delay (s)	1669.4	238.1	24.8		27.7	50.0		346.0	54.4		278.9	
Level of Service	F		C			D		F	D		F	
Approach Delay (s)	415.6		27.6			340.4		263.5				
Approach LOS	F		C			F		F				

Intersection Summary

HCM Average Control Delay	283.2	HCM Level of Service	F
HCM Volume to Capacity ratio	2.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	127.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑			↑↑↑			↑	↗		↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91			0.91			1.00	1.00		1.00	
Frbp, ped/bikes	1.00	0.97			0.99			1.00	0.96		0.99	
Flpb, ped/bikes	0.99	1.00			1.00			0.99	1.00		1.00	
Frt	1.00	0.99			0.99			1.00	0.85		0.99	
Flt Protected	0.95	1.00			1.00			0.99	1.00		0.99	
Satd. Flow (prot)	1471	4100			4210			1534	1281		1513	
Flt Permitted	0.10	1.00			1.00			0.87	1.00		0.63	
Satd. Flow (perm)	148	4100			4210			1349	1281		963	
Volume (vph)	232	1806	196	0	1495	65	68	238	150	49	115	15
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	258	2007	218	0	1661	72	76	264	167	54	128	17
RTOR Reduction (vph)	0	14	0	0	5	0	0	0	5	0	4	0
Lane Group Flow (vph)	258	2211	0	0	1728	0	0	340	162	0	195	0
Conf. Peds. (#/hr)	95		113	113		95	73		22	22		73
Conf. Bikes (#/hr)			13			15			3			3
Turn Type	Perm			Perm			Perm		Perm		Perm	
Protected Phases	6			2			8		8		4	
Permitted Phases	6						8		8		4	
Actuated Green, G (s)	57.7	57.7			57.7			24.8	24.8		24.8	
Effective Green, g (s)	57.2	57.2			57.2			24.8	24.8		24.8	
Actuated g/C Ratio	0.64	0.64			0.64			0.28	0.28		0.28	
Clearance Time (s)	3.5	3.5			3.5			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	94	2606			2676			372	353		265	
v/s Ratio Prot		0.54			0.41							
v/s Ratio Perm	c1.74							c0.25	0.13		0.20	
v/c Ratio	2.74	0.85			0.65			0.91	0.46		0.74	
Uniform Delay, d1	16.4	13.0			10.1			31.6	27.0		29.6	
Progression Factor	1.36	1.33			0.23			1.00	1.00		1.00	
Incremental Delay, d2	806.4	2.7			0.3			26.2	0.9		10.2	
Delay (s)	828.6	20.0			2.6			57.8	28.0		39.8	
Level of Service	F	B			A			E	C		D	
Approach Delay (s)		104.0			2.6			48.0			39.8	
Approach LOS		F			A			D			D	

Intersection Summary			
HCM Average Control Delay	59.9	HCM Level of Service	E
HCM Volume to Capacity ratio	2.19		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	104.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑	↖		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.86	0.86		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.96			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.99	
Satd. Flow (prot)	1583	4537		1583	4300	1218		1590			1585	
Flt Permitted	0.10	1.00		0.08	1.00	1.00		0.89			0.80	
Satd. Flow (perm)	162	4537		128	4300	1218		1421			1279	
Volume (vph)	136	1799	35	74	1421	109	36	171	88	86	215	125
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	149	1977	38	81	1562	120	40	188	97	95	236	137
RTOR Reduction (vph)	0	2	0	0	0	51	0	7	0	0	17	0
Lane Group Flow (vph)	149	2013	0	81	1562	69	0	318	0	0	451	0
Turn Type	Perm			Perm			Perm	Perm			Perm	
Protected Phases	6			2			8	8			4	
Permitted Phases	6			2			8	8			4	
Actuated Green, G (s)	52.0	52.0		52.0	52.0	52.0		30.0			30.0	
Effective Green, g (s)	52.0	52.0		52.0	52.0	52.0		30.0			30.0	
Actuated g/C Ratio	0.58	0.58		0.58	0.58	0.58		0.33			0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	94	2621		74	2484	704		474			426	
v/s Ratio Prot		0.44			0.36							
v/s Ratio Perm	c0.92			0.63		0.06		0.22			c0.35	
v/c Ratio	1.59	0.77		1.09	0.63	0.10		0.67			1.06	
Uniform Delay, d1	19.0	14.4		19.0	12.6	8.5		25.8			30.0	
Progression Factor	1.87	2.02		0.97	0.83	0.61		1.00			1.00	
Incremental Delay, d2	295.6	1.6		118.5	0.9	0.2		3.7			60.2	
Delay (s)	331.1	30.7		137.0	11.4	5.4		29.5			90.2	
Level of Service	F	C		F	B	A		C			F	
Approach Delay (s)		51.4			16.7			29.5			90.2	
Approach LOS		D			B			C			F	

Intersection Summary

HCM Average Control Delay	40.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	1.00		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	4546		1583	4550	1530	
Flt Permitted	1.00		0.07	1.00	0.97	
Satd. Flow (perm)	4546		121	4550	1530	
Volume (vph)	1941	10	51	1509	76	52
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2043	11	54	1588	80	55
RTOR Reduction (vph)	0	0	0	0	4	0
Lane Group Flow (vph)	2054	0	54	1588	131	0
Turn Type			Perm			
Protected Phases	6			2	8	
Permitted Phases			2			
Actuated Green, G (s)	54.8		54.8	54.8	26.0	
Effective Green, g (s)	55.3		55.3	55.3	26.7	
Actuated g/C Ratio	0.61		0.61	0.61	0.30	
Clearance Time (s)	4.5		4.5	4.5	4.7	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2793		74	2796	454	
v/s Ratio Prot	c0.45			0.35	c0.09	
v/s Ratio Perm			0.45			
v/c Ratio	0.74		0.73	0.57	0.29	
Uniform Delay, d1	12.2		12.1	10.3	24.4	
Progression Factor	1.00		1.54	1.59	1.00	
Incremental Delay, d2	1.8		37.3	0.6	0.4	
Delay (s)	14.0		55.9	17.0	24.7	
Level of Service	B		E	B	C	
Approach Delay (s)	14.0			18.3	24.7	
Approach LOS	B			B	C	

Intersection Summary

HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗	↘	↘	↗↗	↘	↘	↗↗	↘
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	3167	1417	1583	3167	1417	1583	3167	1417	1583	3152	3152
Flt Permitted	0.14	1.00	1.00	0.10	1.00	1.00	0.15	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	239	3167	1417	167	3167	1417	247	3167	1417	215	3152	3152
Volume (vph)	106	1454	111	158	1199	141	122	1305	245	124	1320	41
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	110	1515	116	165	1249	147	127	1359	255	129	1375	43
RTOR Reduction (vph)	0	0	17	0	0	1	0	0	120	0	2	0
Lane Group Flow (vph)	110	1515	99	165	1249	146	127	1359	135	129	1416	0
Turn Type	Perm		Perm	pm+pt		pm+ov	Perm		Perm	pm+pt		
Protected Phases		6		5		2	7		8		7	4
Permitted Phases	6		6	2		2	8		8		4	
Actuated Green, G (s)	35.0	35.0	35.0	44.0	44.0	49.7	27.1	27.1	27.1	36.0	36.0	
Effective Green, g (s)	36.0	36.0	36.0	45.0	45.0	51.0	27.0	27.0	27.0	37.0	37.0	
Actuated g/C Ratio	0.40	0.40	0.40	0.50	0.50	0.57	0.30	0.30	0.30	0.41	0.41	
Clearance Time (s)	5.0	5.0	5.0	3.2	5.0	4.3	3.9	3.9	3.9	4.3	5.0	
Vehicle Extension (s)	4.7	4.7	4.7	3.0	4.2	3.0	4.3	4.3	4.3	3.0	4.5	
Lane Grp Cap (vph)	96	1267	567	162	1584	866	74	950	425	180	1296	
v/s Ratio Prot		c0.48		c0.06	0.39	0.01		0.43		0.05	c0.45	
v/s Ratio Perm	0.46		0.07	0.45		0.09	c0.51		0.10	0.25		
v/c Ratio	1.15	1.20	0.17	1.02	0.79	0.17	1.72	1.43	0.32	0.72	1.09	
Uniform Delay, d1	27.0	27.0	17.4	44.7	18.6	9.3	31.5	31.5	24.4	42.7	26.5	
Progression Factor	1.00	1.00	1.00	2.35	0.27	0.32	0.51	0.50	0.14	1.12	1.15	
Incremental Delay, d2	136.5	96.0	0.7	26.0	0.4	0.0	327.5	194.3	0.2	7.8	49.6	
Delay (s)	163.5	123.0	18.1	130.8	5.3	3.0	343.4	210.1	3.5	55.5	80.0	
Level of Service	F	F	B	F	A	A	F	F	A	E	F	
Approach Delay (s)		118.6			18.4			189.6			78.0	
Approach LOS		F			B			F			E	

Intersection Summary

HCM Average Control Delay	104.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	118.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗	↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3141		1583	3167	1417	1583	3134		1583	3117	
Flt Permitted	0.19	1.00		0.12	1.00	1.00	0.14	1.00		0.12	1.00	
Satd. Flow (perm)	320	3141		196	3167	1417	238	3134		208	3117	
Volume (vph)	198	1323	74	129	827	197	87	1259	93	236	1352	157
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	202	1350	76	132	844	201	89	1285	95	241	1380	160
RTOR Reduction (vph)	0	4	0	0	0	27	0	6	0	0	10	0
Lane Group Flow (vph)	202	1422	0	132	844	174	89	1374	0	241	1530	0
Turn Type	pm+pt			pm+pt		pm+ov	Perm			pm+pt		
Protected Phases	1	6		5	2	7		8		7	4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	40.1	32.3		39.7	32.1	37.9	26.1	26.1		35.1	35.1	
Effective Green, g (s)	41.2	34.2		40.8	34.0	39.0	28.0	28.0		37.0	37.0	
Actuated g/C Ratio	0.46	0.38		0.45	0.38	0.43	0.31	0.31		0.41	0.41	
Clearance Time (s)	3.2	5.9		3.2	5.9	3.2	5.9	5.9		3.2	5.9	
Vehicle Extension (s)	3.0	4.6		3.0	4.7	3.0	4.7	4.7		3.0	4.7	
Lane Grp Cap (vph)	245	1194		194	1196	677	74	975		162	1281	
v/s Ratio Prot	c0.06	c0.45		0.05	0.27	0.01		0.44		0.08	c0.49	
v/s Ratio Perm	0.31			0.26		0.11	0.37			c0.53		
v/c Ratio	0.82	1.19		0.68	0.71	0.26	1.20	1.41		1.49	1.19	
Uniform Delay, d1	17.2	27.9		21.1	23.8	16.3	31.0	31.0		44.7	26.5	
Progression Factor	1.00	1.00		1.76	1.06	0.87	1.51	1.50		0.93	0.49	
Incremental Delay, d2	19.7	94.4		0.9	0.3	0.0	161.3	189.4		229.9	90.2	
Delay (s)	36.9	122.3		38.1	25.5	14.2	208.3	235.9		271.3	103.2	
Level of Service	D	F		D	C	B	F	F		F	F	
Approach Delay (s)		111.7			25.0			234.2			126.0	
Approach LOS		F			C			F			F	

Intersection Summary

HCM Average Control Delay	128.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	121.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖↗	↖	↗	↖	↖↗	↗	↖	↖↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	0.98		1.00	1.00	0.75	1.00	1.00	0.65	1.00	0.98	
Flpb, ped/bikes	0.85	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1352	1611		3072	1667	1060	1583	3167	918	1506	3097	
Flt Permitted	0.55	1.00		0.95	1.00	1.00	0.10	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	776	1611		3072	1667	1060	159	3167	918	268	3097	
Volume (vph)	19	435	41	153	347	130	45	1056	275	27	1253	56
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	20	453	43	159	361	135	47	1100	286	28	1305	58
RTOR Reduction (vph)	0	4	0	0	0	16	0	0	0	0	3	0
Lane Group Flow (vph)	20	492	0	159	361	119	47	1100	286	28	1360	0
Conf. Peds. (#/hr)	152		159	159		152	117		165	165		117
Conf. Bikes (#/hr)			5			9			7			6
Turn Type	Perm			Prot		Perm	Perm		pm+ov	Perm		
Protected Phases		8		7	4			6	7		2	
Permitted Phases	8					4	6		6		2	
Actuated Green, G (s)	20.2	20.2		10.0	34.2	34.2	46.2	46.2	56.2	46.2	46.2	
Effective Green, g (s)	21.0	21.0		10.0	35.0	35.0	47.0	47.0	57.0	47.0	47.0	
Actuated g/C Ratio	0.23	0.23		0.11	0.39	0.39	0.52	0.52	0.63	0.52	0.52	
Clearance Time (s)	4.8	4.8		4.0	4.8	4.8	4.8	4.8	4.0	4.8	4.8	
Vehicle Extension (s)	5.9	5.9		3.0	5.2	5.2	4.8	4.8	3.0	4.4	4.4	
Lane Grp Cap (vph)	181	376		341	648	412	83	1654	622	140	1617	
v/s Ratio Prot		c0.31		0.05	c0.22			0.35	0.05		c0.44	
v/s Ratio Perm	0.03					0.11	0.30		0.26	0.10		
v/c Ratio	0.11	1.31		0.47	0.56	0.29	0.57	0.67	0.46	0.20	0.84	
Uniform Delay, d1	27.1	34.5		37.5	21.5	18.9	14.6	15.7	8.5	11.5	18.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.31	0.27	0.31	0.46	0.78	
Incremental Delay, d2	1.2	157.0		1.0	3.4	1.8	2.5	0.2	0.0	0.3	0.5	
Delay (s)	28.4	191.5		38.5	24.9	20.7	7.1	4.4	2.7	5.5	14.9	
Level of Service	C	F		D	C	C	A	A	A	A	B	
Approach Delay (s)		185.2			27.3			4.2			14.7	
Approach LOS		F			C			A			B	

Intersection Summary

HCM Average Control Delay	35.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖		↖	↖↖↖		↖	↖↖		↖	↖↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.97		1.00	0.98		1.00	0.94		1.00	1.00	0.81
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4320		1583	4401		1583	2907		1583	3167	1152
Flt Permitted	0.14	1.00		0.14	1.00		0.13	1.00		0.95	1.00	1.00
Satd. Flow (perm)	238	4320		238	4401		222	2907		1583	3167	1152
Volume (vph)	310	1920	326	167	1204	113	107	1290	233	160	1559	221
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	326	2021	343	176	1267	119	113	1358	245	168	1641	233
RTOR Reduction (vph)	0	26	0	0	12	0	0	17	0	0	0	119
Lane Group Flow (vph)	326	2338	0	176	1374	0	113	1586	0	168	1641	114
Conf. Peds. (#/hr)	152		159	159		152	165		213	213		165
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8					4
Actuated Green, G (s)	33.8	27.0		33.8	27.0		35.7	29.0		10.8	33.1	33.1
Effective Green, g (s)	34.0	28.0		34.0	28.0		35.9	30.0		10.0	34.1	34.1
Actuated g/C Ratio	0.38	0.31		0.38	0.31		0.40	0.33		0.11	0.38	0.38
Clearance Time (s)	3.2	5.0		3.2	5.0		3.2	5.0		3.2	5.0	5.0
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	180	1344		180	1369		178	969		176	1200	436
v/s Ratio Prot	c0.12	0.54		0.07	0.31		0.04	c0.55		c0.11	0.52	
v/s Ratio Perm	c0.56			0.30			0.21					0.10
v/c Ratio	1.81	1.74		0.98	1.00		0.63	1.64		0.95	1.37	0.26
Uniform Delay, d1	25.2	31.0		44.1	31.0		22.5	30.0		39.8	27.9	19.3
Progression Factor	1.29	1.18		1.00	1.00		1.18	0.82		0.83	1.46	2.85
Incremental Delay, d2	379.9	334.9		59.9	25.1		6.0	290.6		47.6	169.7	1.2
Delay (s)	412.6	371.5		104.0	56.1		32.6	315.2		80.6	210.7	56.2
Level of Service	F	F		F	E		C	F		F	F	E
Approach Delay (s)		376.5			61.5			296.6			182.3	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	248.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	133.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations			↗	↖	↔	↗		↕		↖	↗		
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	
Total Lost time (s)			4.0	4.0	4.0	4.0		4.0		4.0	4.0		
Lane Util. Factor			1.00	0.95	0.91	0.95		0.95		1.00	0.95		
Frbp, ped/bikes			0.98	1.00	0.98	0.97		0.99		1.00	1.00		
Flpb, ped/bikes			1.00	1.00	1.00	1.00		1.00		1.00	1.00		
Frt			0.86	1.00	0.92	0.85		0.99		1.00	1.00		
Flt Protected			1.00	0.95	0.98	1.00		1.00		0.95	1.00		
Satd. Flow (prot)			1413	1501	1336	1299		3101		1583	3167		
Flt Permitted			1.00	0.95	0.98	1.00		1.00		0.12	1.00		
Satd. Flow (perm)			1413	1501	1336	1299		3101		204	3167		
Volume (vph)	0	0	83	112	0	129	0	1305	125	183	1193	0	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Adj. Flow (vph)	0	0	85	114	0	132	0	1332	128	187	1217	0	
RTOR Reduction (vph)	0	0	80	0	41	72	0	6	0	0	0	0	
Lane Group Flow (vph)	0	0	5	73	48	12	0	1454	0	187	1217	0	
Conf. Peds. (#/hr)	10		1	1		10	18		29	29		18	
Conf. Bikes (#/hr)			1			2			3			3	
Turn Type			custom	Perm		Perm				Perm			
Protected Phases					3			2			2		
Permitted Phases			4	3		3				2			
Actuated Green, G (s)			4.8	12.3	12.3	12.3		58.5		58.5	58.5		
Effective Green, g (s)			5.7	13.2	13.2	13.2		59.1		59.1	59.1		
Actuated g/C Ratio			0.06	0.15	0.15	0.15		0.66		0.66	0.66		
Clearance Time (s)			4.9	4.9	4.9	4.9		4.6		4.6	4.6		
Vehicle Extension (s)			3.0	3.0	3.0	3.0		3.0		3.0	3.0		
Lane Grp Cap (vph)			89	220	196	191		2036		134	2080		
v/s Ratio Prot								0.47			0.38		
v/s Ratio Perm			c0.00	c0.05	0.04	0.01				c0.92			
v/c Ratio			0.06	0.33	0.25	0.06		0.71		1.40	0.59		
Uniform Delay, d1			39.6	34.4	34.0	33.1		10.0		15.4	8.6		
Progression Factor			1.00	1.00	1.00	1.00		1.00		1.24	0.73		
Incremental Delay, d2			0.3	0.9	0.7	0.1		2.2		182.2	0.1		
Delay (s)			39.9	35.3	34.6	33.2		12.2		201.3	6.4		
Level of Service			D	D	C	C		B		F	A		
Approach Delay (s)		39.9			34.4			12.2			32.3		
Approach LOS		D			C			B			C		
Intersection Summary													
HCM Average Control Delay			23.5		HCM Level of Service						C		
HCM Volume to Capacity ratio			1.12										
Actuated Cycle Length (s)			90.0		Sum of lost time (s)					12.0			
Intersection Capacity Utilization			78.6%		ICU Level of Service					D			
Analysis Period (min)			15										
c Critical Lane Group													



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑		↔	↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	
Lane Util. Factor		0.91			0.91		1.00	0.86			0.86	
Frt		0.99			0.96		1.00	1.00			1.00	
Flt Protected		1.00			1.00		0.95	1.00			1.00	
Satd. Flow (prot)		4494			4365		1583	5733			5733	
Flt Permitted		1.00			1.00		0.17	1.00			1.00	
Satd. Flow (perm)		4494			4365		284	5733			5733	
Volume (vph)	0	1927	173	0	1224	454	77	1235	0	0	1544	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1966	177	0	1249	463	79	1260	0	0	1576	0
RTOR Reduction (vph)	0	11	0	0	67	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2132	0	0	1645	0	79	1260	0	0	1576	0
Turn Type							Perm					
Protected Phases		6			6			2			2	
Permitted Phases							2					
Actuated Green, G (s)		22.1			22.1		24.5	24.5			24.5	
Effective Green, g (s)		23.0			23.0		23.5	23.5			23.5	
Actuated g/C Ratio		0.23			0.23		0.24	0.24			0.24	
Clearance Time (s)		4.9			4.9		3.0	3.0			3.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		1034			1004		67	1347			1347	
v/s Ratio Prot		c0.47			0.38			0.22			0.27	
v/s Ratio Perm							c0.28					
v/c Ratio		2.06			1.64		1.18	0.94			1.17	
Uniform Delay, d1		38.5			38.5		38.2	37.5			38.2	
Progression Factor		0.70			1.00		1.00	1.00			0.72	
Incremental Delay, d2		478.3			291.8		166.3	13.3			77.3	
Delay (s)		505.2			330.3		204.6	50.8			104.7	
Level of Service		F			F		F	D			F	
Approach Delay (s)		505.2			330.3			59.9			104.7	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	279.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	53.5
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗		↑↑↑	↗		↑↔		↘	↑↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.86	1.00		0.91	1.00		0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85		1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1583	5733	1417		4550	1417		3165		1583	3147	
Flt Permitted	0.17	1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)	284	5733	1417		4550	1417		3165		1583	3147	
Volume (vph)	26	1423	34	0	1328	344	0	1068	3	169	1151	51
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	27	1452	35	0	1355	351	0	1090	3	172	1174	52
RTOR Reduction (vph)	0	0	27	0	0	269	0	0	0	0	3	0
Lane Group Flow (vph)	27	1452	8	0	1355	82	0	1093	0	172	1223	0
Turn Type	Perm		Perm		Perm				Prot			
Protected Phases	2		2		2		8		7		4	
Permitted Phases	2		2		2							
Actuated Green, G (s)	24.5	24.5	24.5		24.5	24.5		31.0		5.0	31.0	
Effective Green, g (s)	23.5	23.5	23.5		23.5	23.5		32.5		5.0	32.5	
Actuated g/C Ratio	0.24	0.24	0.24		0.24	0.24		0.32		0.05	0.32	
Clearance Time (s)	3.0	3.0	3.0		3.0	3.0		5.5		4.0	5.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		5.0		3.0	4.0	
Lane Grp Cap (vph)	67	1347	333		1069	333		1029		79	1023	
v/s Ratio Prot		0.25			c0.30			0.35		c0.11	c0.39	
v/s Ratio Perm	0.10		0.01			0.06						
v/c Ratio	0.40	1.08	0.02		1.27	0.25		1.06		2.18	1.20	
Uniform Delay, d1	32.3	38.2	29.4		38.2	31.1		33.8		47.5	33.8	
Progression Factor	1.00	1.00	1.00		0.82	1.92		0.42		1.00	1.00	
Incremental Delay, d2	17.1	48.5	0.1		121.1	0.2		30.5		569.0	97.5	
Delay (s)	49.4	86.7	29.6		152.6	59.9		44.5		616.5	131.3	
Level of Service	D	F	C		F	E		D		F	F	
Approach Delay (s)		84.7			133.6			44.5			191.0	
Approach LOS		F			F			D			F	

Intersection Summary

HCM Average Control Delay	117.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	39.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95			0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.99			0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1583	4540		1583	4545		1583	3137			3068	
Flt Permitted	0.17	1.00		0.17	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	290	4540		290	4545		1583	3137			3068	
Volume (vph)	265	2090	32	59	1224	9	35	747	49	0	945	247
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	270	2133	33	60	1249	9	36	762	50	0	964	252
RTOR Reduction (vph)	0	2	0	0	1	0	0	5	0	0	24	0
Lane Group Flow (vph)	270	2164	0	60	1257	0	36	807	0	0	1192	0
Turn Type	Perm		Perm		Prot							
Protected Phases	6		6		3		8				4	
Permitted Phases	6		6									
Actuated Green, G (s)	22.1	22.1		22.1	22.1		5.0	31.0			31.0	
Effective Green, g (s)	23.0	23.0		23.0	23.0		5.0	32.5			32.5	
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.05	0.32			0.32	
Clearance Time (s)	4.9	4.9		4.9	4.9		4.0	5.5			5.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	5.0			4.0	
Lane Grp Cap (vph)	67	1044		67	1045		79	1020			997	
v/s Ratio Prot		0.48			0.28		c0.02	0.26			c0.39	
v/s Ratio Perm	c0.93		0.21									
v/c Ratio	4.03	2.07		0.90	1.20		0.46	0.79			1.20	
Uniform Delay, d1	38.5	38.5		37.3	38.5		46.2	30.7			33.8	
Progression Factor	1.00	1.00		0.71	0.70		1.00	1.00			0.25	
Incremental Delay, d2	1398.3	486.3		15.6	92.3		4.1	6.3			89.2	
Delay (s)	1436.8	524.8		41.9	119.2		50.3	36.9			97.8	
Level of Service	F	F		D	F		D	D			F	
Approach Delay (s)		625.8			115.7			37.5			97.8	
Approach LOS		F			F			D			F	

Intersection Summary

HCM Average Control Delay	314.2	HCM Level of Service	F
HCM Volume to Capacity ratio	2.22		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	39.5
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖	↖	↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Fr _t	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	3145		1583	3152		1583	3167	1417	1583	3167	1417
Fl _t Permitted	0.14	1.00		0.13	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	231	3145		222	3152		1583	3167	1417	1583	3167	1417
Volume (vph)	99	1360	65	51	826	26	97	702	189	79	929	80
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	103	1417	68	53	860	27	101	731	197	82	968	83
RTOR Reduction (vph)	0	4	0	0	3	0	0	0	61	0	0	46
Lane Group Flow (vph)	103	1481	0	53	884	0	101	731	136	82	968	37
Turn Type	Perm			Perm			Prot		Perm	Prot		Perm
Protected Phases	6			2			3		8	7		4
Permitted Phases	6			2					8			4
Actuated Green, G (s)	29.0	29.0		29.0	29.0		7.8	39.3	39.3	7.7	39.2	39.2
Effective Green, g (s)	30.0	30.0		30.0	30.0		7.8	40.3	40.3	7.7	40.2	40.2
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.09	0.45	0.45	0.09	0.45	0.45
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	77	1048		74	1051		137	1418	635	135	1415	633
v/s Ratio Prot	c0.47			0.28			c0.06	0.23		0.05	c0.31	
v/s Ratio Perm	0.45			0.24			0.10			0.03		
v/c Ratio	1.34	1.41		0.72	0.84		0.74	0.52	0.21	0.61	0.68	0.06
Uniform Delay, d ₁	30.0	30.0		26.3	27.8		40.1	17.8	15.2	39.7	19.8	14.1
Progression Factor	0.83	0.83		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d ₂	159.9	186.5		45.3	8.2		18.5	1.3	0.8	7.5	2.7	0.2
Delay (s)	184.9	211.2		71.6	36.0		58.6	19.2	16.0	47.2	22.5	14.3
Level of Service	F			E			E		B	B	D	C
Approach Delay (s)	209.5			38.0			22.4			23.7		
Approach LOS	F			D			C			C		

Intersection Summary			
HCM Average Control Delay	89.2	HCM Level of Service	F
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↑↑			↖	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95			0.95	
Frt	1.00	0.99		1.00	0.99			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1583	4507		1583	4485			3128			3131	
Flt Permitted	0.11	1.00		0.09	1.00			1.00			0.78	
Satd. Flow (perm)	175	4507		146	4485			3128			2439	
Volume (vph)	173	1926	128	106	1340	142	0	990	87	31	828	58
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	177	1965	131	108	1367	145	0	1010	89	32	845	59
RTOR Reduction (vph)	0	8	0	0	14	0	0	3	0	0	5	0
Lane Group Flow (vph)	177	2088	0	108	1498	0	0	1096	0	0	931	0
Turn Type	Perm		Perm				Perm					
Protected Phases	6		2				8					
Permitted Phases	6		2				4					
Actuated Green, G (s)	44.0	44.0		44.0	44.0			34.3			34.3	
Effective Green, g (s)	45.7	45.7		45.7	45.7			36.3			36.3	
Actuated g/C Ratio	0.51	0.51		0.51	0.51			0.40			0.40	
Clearance Time (s)	5.7	5.7		5.7	5.7			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	89	2289		74	2277			1262			984	
v/s Ratio Prot		0.46			0.33			0.35				
v/s Ratio Perm	c1.01			0.74							c0.38	
v/c Ratio	1.99	0.91		1.46	0.66			0.87			0.95	
Uniform Delay, d1	22.1	20.3		22.1	16.4			24.7			25.9	
Progression Factor	0.40	0.36		0.60	0.26			1.00			1.00	
Incremental Delay, d2	448.6	0.7		236.0	0.7			6.6			17.0	
Delay (s)	457.4	8.0		249.2	4.9			31.2			42.9	
Level of Service	F	A		F	A			C			D	
Approach Delay (s)		43.0			21.2			31.2			42.9	
Approach LOS		D			C			C			D	

Intersection Summary

HCM Average Control Delay	34.8	HCM Level of Service	C
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑↑		↖	↑↑↑	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.98		1.00	0.99		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4466		1583	4483		1583	4368		1583	4550	1417
Flt Permitted	0.13	1.00		0.13	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	218	4466		218	4483		1583	4368		1583	4550	1417
Volume (vph)	295	1766	247	356	1170	128	76	926	338	215	1640	244
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	307	1840	257	371	1219	133	79	965	352	224	1708	254
RTOR Reduction (vph)	0	20	0	0	15	0	0	39	0	0	0	114
Lane Group Flow (vph)	307	2077	0	371	1337	0	79	1278	0	224	1708	140
Turn Type	Perm			Perm			Prot			Prot		Perm
Protected Phases	4			8			5			1		6
Permitted Phases	4			8			2					6
Actuated Green, G (s)	28.6	28.6		28.6	28.6		7.8	32.1		14.3	37.6	37.6
Effective Green, g (s)	30.6	30.6		30.6	30.6		8.8	33.1		14.3	38.6	38.6
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.10	0.37		0.16	0.43	0.43
Clearance Time (s)	6.0	6.0		6.0	6.0		5.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	4.0	4.0		4.0	4.0		2.0	4.0		2.0	4.0	4.0
Lane Grp Cap (vph)	74	1518		74	1524		155	1606		252	1951	608
v/s Ratio Prot		0.46			0.30		0.05			c0.14	c0.38	
v/s Ratio Perm	1.41			c1.70				0.29				0.10
v/c Ratio	4.15	1.37		5.01	0.88		0.51	0.80		0.89	0.88	0.23
Uniform Delay, d1	29.7	29.7		29.7	27.9		38.6	25.4		37.1	23.5	16.3
Progression Factor	1.00	1.00		0.36	0.32		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1448.2	169.9		1831.2	6.4		1.0	4.2		28.5	5.9	0.9
Delay (s)	1477.9	199.6		1841.9	15.2		39.5	29.6		65.6	29.4	17.2
Level of Service	F	F		F	B		D	C		E	C	B
Approach Delay (s)		362.8			408.6			30.2			31.7	
Approach LOS		F			F			C			C	

Intersection Summary

HCM Average Control Delay	218.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.40		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	121.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



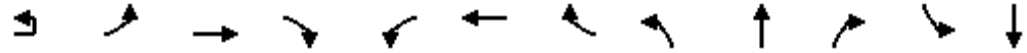
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	0.92
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	1.00
Satd. Flow (prot)	1561	4540		1577	4511			1585			1650	1306
Flt Permitted	0.14	1.00		0.06	1.00			0.96			0.93	1.00
Satd. Flow (perm)	222	4540		98	4511			1527			1551	1306
Volume (vph)	80	1993	14	25	1387	39	25	182	50	23	154	262
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	85	2120	15	27	1476	41	27	194	53	24	164	279
RTOR Reduction (vph)	0	1	0	0	3	0	0	8	0	0	0	34
Lane Group Flow (vph)	85	2134	0	27	1514	0	0	266	0	0	188	245
Confl. Peds. (#/hr)	67		64	64		67	46		45	45		46
Confl. Bikes (#/hr)			7			5			5			6
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	69.0	69.0		69.0	69.0			25.0			25.0	25.0
Effective Green, g (s)	68.0	68.0		68.0	68.0			24.0			24.0	24.0
Actuated g/C Ratio	0.68	0.68		0.68	0.68			0.24			0.24	0.24
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0			3.0			3.0	3.0
Lane Grp Cap (vph)	151	3087		67	3067			366			372	313
v/s Ratio Prot		c0.47			0.34							
v/s Ratio Perm	0.38			0.28				0.17			0.12	c0.19
v/c Ratio	0.56	0.69		0.40	0.49			0.73			0.51	0.78
Uniform Delay, d1	8.3	9.7		7.1	7.7			35.0			32.9	35.6
Progression Factor	0.70	0.44		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.4	0.1		17.1	0.6			11.9			4.8	17.5
Delay (s)	7.2	4.4		24.1	8.3			46.8			37.7	53.1
Level of Service	A	A		C	A			D			D	D
Approach Delay (s)		4.5			8.6			46.8			46.9	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘↗	↑↑↗		↘↗	↑↑↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.91		0.97	0.91	
Frbp, ped/bikes	1.00	1.00	0.74	1.00	0.92		1.00	0.97		1.00	0.95	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1574	3167	1042	1583	2813		3072	4395		3072	4202	
Flt Permitted	0.15	1.00	1.00	0.11	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	247	3167	1042	185	2813		3072	4395		3072	4202	
Volume (vph)	330	1157	87	254	554	181	65	2085	122	151	1530	280
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	351	1231	93	270	589	193	69	2218	130	161	1628	298
RTOR Reduction (vph)	0	0	48	0	27	0	0	5	0	0	21	0
Lane Group Flow (vph)	351	1231	45	270	755	0	69	2343	0	161	1905	0
Confl. Peds. (#/hr)	220		169	169		220	310		128	128		310
Confl. Bikes (#/hr)			10			8			9			7
Turn Type	pm+pt		Perm	pm+pt		Prot		Prot		Prot		
Protected Phases	1	6		5	2	3	8		7	4		
Permitted Phases	6		6	2								
Actuated Green, G (s)	49.6	34.6	34.6	49.6	34.6	9.6	43.4		9.6	43.4		
Effective Green, g (s)	50.0	36.0	36.0	50.0	36.0	9.6	44.4		9.6	44.4		
Actuated g/C Ratio	0.42	0.30	0.30	0.42	0.30	0.08	0.37		0.08	0.37		
Clearance Time (s)	3.0	5.4	5.4	3.0	5.4	4.0	5.0		4.0	5.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	258	950	313	240	844	246	1626		246	1555		
v/s Ratio Prot	c0.16	0.39		0.13	0.27	0.02	c0.53		0.05	c0.45		
v/s Ratio Perm	c0.41		0.04	0.34								
v/c Ratio	1.36	1.30	0.15	1.12	0.90	0.28	1.44		0.65	1.22		
Uniform Delay, d1	28.7	42.0	30.7	55.2	40.2	51.9	37.8		53.6	37.8		
Progression Factor	1.34	0.98	1.23	1.00	1.00	0.97	0.94		1.22	0.46		
Incremental Delay, d2	164.5	133.8	0.0	95.9	14.0	0.4	200.7		0.6	101.7		
Delay (s)	202.9	174.9	37.9	151.0	54.2	50.6	236.1		65.9	118.9		
Level of Service	F	F	D	F	D	D	F		E	F		
Approach Delay (s)		173.2			79.1		230.8			114.8		
Approach LOS		F			E		F			F		

Intersection Summary			
HCM Average Control Delay	161.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	118.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↑↑		↔	↑↑↑	↔	↔		↔	↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00		0.91		1.00	0.86	0.86	1.00		1.00	0.97	
Frt	1.00		1.00		1.00	0.97	0.85	1.00		0.85	1.00	
Flt Protected	0.95		1.00		0.95	1.00	1.00	0.95		1.00	0.95	
Satd. Flow (prot)	1583		4538		1583	4153	1218	1583		1417	3072	
Flt Permitted	0.95		1.00		0.95	1.00	1.00	0.95		1.00	0.95	
Satd. Flow (perm)	1583		4538		1583	4153	1218	1583		1417	3072	
Volume (vph)	21	0	1174	21	14	886	885	36	0	46	1002	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	22	0	1249	22	15	943	941	38	0	49	1066	0
RTOR Reduction (vph)	0	0	1	0	0	41	403	0	0	47	0	0
Lane Group Flow (vph)	22	0	1270	0	15	1180	260	38	0	2	1066	0
Turn Type	Prot				Prot		Perm	Prot			custom	custom
Protected Phases	5		2		1		6			7		
Permitted Phases							6				7	8
Actuated Green, G (s)	2.0		46.1		2.0	45.2	45.2	4.0		4.0	46.1	
Effective Green, g (s)	3.9		47.1		3.9	47.1	47.1	5.0		5.0	48.0	
Actuated g/C Ratio	0.03		0.39		0.03	0.39	0.39	0.04		0.04	0.40	
Clearance Time (s)	5.9		5.0		5.9	5.9	5.9	5.0		5.0	5.9	
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	51		1781		51	1630	478	66		59	1229	
v/s Ratio Prot	0.01		c0.28		0.01	c0.28		c0.02				
v/s Ratio Perm							0.21			0.00	c0.35	
v/c Ratio	0.43		0.71		0.29	0.72	0.54	0.58		0.03	0.87	
Uniform Delay, d1	57.0		30.7		56.7	30.9	28.2	56.5		55.2	33.1	
Progression Factor	1.32		1.54		1.05	1.64	8.58	1.00		1.00	1.18	
Incremental Delay, d2	0.5		0.2		1.9	1.7	2.6	11.6		0.2	4.4	
Delay (s)	75.7		47.7		61.3	52.3	244.3	68.0		55.4	43.3	
Level of Service	E		D		E	D	F	E		E	D	
Approach Delay (s)			48.2			119.4			60.9			43.8
Approach LOS			D			F			E			D
Intersection Summary												
HCM Average Control Delay			78.0									HCM Level of Service E
HCM Volume to Capacity ratio			0.77									
Actuated Cycle Length (s)			120.0									Sum of lost time (s) 12.0
Intersection Capacity Utilization			72.0%									ICU Level of Service C
Analysis Period (min)			15									
c Critical Lane Group												



Movement	SBR
Lane Configurations	7
Ideal Flow (vphpl)	1700
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1417
Flt Permitted	1.00
Satd. Flow (perm)	1417
Volume (vph)	61
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	65
RTOR Reduction (vph)	39
Lane Group Flow (vph)	26
Turn Type	custom
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	46.1
Effective Green, g (s)	48.0
Actuated g/C Ratio	0.40
Clearance Time (s)	5.9
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	567
v/s Ratio Prot	
v/s Ratio Perm	0.02
v/c Ratio	0.05
Uniform Delay, d1	22.0
Progression Factor	2.33
Incremental Delay, d2	0.1
Delay (s)	51.4
Level of Service	D
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑	↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor		0.86	1.00		0.86	1.00	1.00	0.91			0.91	
Frt		1.00	0.85		1.00	0.85	1.00	1.00			0.97	
Flt Protected		1.00	1.00		1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)		5733	1417		5733	1417	1583	4549			4433	
Flt Permitted		1.00	1.00		1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)		5733	1417		5733	1417	1583	4549			4433	
Volume (vph)	0	1615	353	0	1251	394	187	2001	2	0	1693	350
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1665	364	0	1290	406	193	2063	2	0	1745	361
RTOR Reduction (vph)	0	0	3	0	0	8	0	0	0	0	26	0
Lane Group Flow (vph)	0	1665	361	0	1290	398	193	2065	0	0	2080	0
Turn Type		pm+ov			Perm		Prot					
Protected Phases		8	1		4		1	6			2	
Permitted Phases		8	8			4						
Actuated Green, G (s)		34.2	49.2		34.2	34.2	15.0	73.8			53.3	
Effective Green, g (s)		36.2	52.7		36.2	36.2	16.5	75.8			55.3	
Actuated g/C Ratio		0.30	0.44		0.30	0.30	0.14	0.63			0.46	
Clearance Time (s)		6.0	5.5		6.0	6.0	5.5	6.0			6.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)		1729	670		1729	427	218	2873			2043	
v/s Ratio Prot		c0.29	0.07		0.22		c0.12	0.45			c0.47	
v/s Ratio Perm			0.18			0.28						
v/c Ratio		0.96	0.54		0.75	0.93	0.89	0.72			1.02	
Uniform Delay, d1		41.2	24.7		37.8	40.7	50.8	14.9			32.4	
Progression Factor		1.17	1.11		1.00	1.00	1.07	0.78			0.32	
Incremental Delay, d2		10.7	0.5		3.0	29.3	23.9	1.1			11.3	
Delay (s)		59.1	27.9		40.7	70.0	78.4	12.6			21.6	
Level of Service		E	C		D	E	E	B			C	
Approach Delay (s)		53.5			47.7			18.3			21.6	
Approach LOS		D			D			B			C	

Intersection Summary

HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕↕↕		↗	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.98			0.97		1.00	1.00		1.00	0.99	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1600			1606		1583	4527		1583	4506	
Flt Permitted		0.81			0.94		0.08	1.00		0.06	1.00	
Satd. Flow (perm)		1325			1521		141	4527		105	4506	
Volume (vph)	205	180	60	10	48	17	115	1965	68	127	1713	117
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	209	184	61	10	49	17	117	2005	69	130	1748	119
RTOR Reduction (vph)	0	5	0	0	8	0	0	3	0	0	6	0
Lane Group Flow (vph)	0	449	0	0	68	0	117	2071	0	130	1861	0
Turn Type		Perm		Perm		Perm		Perm		Perm		Perm
Protected Phases		4		8		8		2		2		6
Permitted Phases		4		8		2		2		6		6
Actuated Green, G (s)		30.0		30.0		83.4		83.4		83.4		83.4
Effective Green, g (s)		29.0		29.0		83.0		83.0		83.0		83.0
Actuated g/C Ratio		0.24		0.24		0.69		0.69		0.69		0.69
Clearance Time (s)		3.0		3.0		3.6		3.6		3.6		3.6
Vehicle Extension (s)		3.0		3.0		5.0		5.0		5.0		5.0
Lane Grp Cap (vph)		320		368		98		3131		73		3117
v/s Ratio Prot								0.46				0.41
v/s Ratio Perm		c0.34		0.04		0.83				c1.23		
v/c Ratio		1.40		0.18		1.19		0.66		1.78		0.60
Uniform Delay, d1		45.5		36.1		18.5		10.5		18.5		9.7
Progression Factor		1.00		1.00		1.00		1.00		0.67		0.33
Incremental Delay, d2		199.8		1.1		152.1		1.1		370.1		0.3
Delay (s)		245.3		37.2		170.6		11.6		382.5		3.5
Level of Service		F		D		F		B		F		A
Approach Delay (s)		245.3		37.2				20.1				28.2
Approach LOS		F		D				C				C

Intersection Summary

HCM Average Control Delay	45.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
39: Wilshire Blvd & La Cienega Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑↑		↗	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.95		1.00	0.99		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4191		1583	4485		1583	4463		1583	4373	
Flt Permitted	0.11	1.00		0.11	1.00		0.12	1.00		0.12	1.00	
Satd. Flow (perm)	190	4191		190	4485		193	4463		196	4373	
Volume (vph)	205	1918	505	177	1422	64	217	1956	127	108	1508	183
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	218	2040	537	188	1513	68	231	2081	135	115	1604	195
RTOR Reduction (vph)	0	47	0	0	5	0	0	7	0	0	15	0
Lane Group Flow (vph)	218	2530	0	188	1576	0	231	2209	0	115	1784	0
Conf. Peds. (#/hr)	118		158	158		118	139		109	109		139
Conf. Bikes (#/hr)			6			13			4			11
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt		pm+pt		pm+pt	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	44.5	35.5		44.5	35.5		42.5	34.5		41.5	34.0	
Effective Green, g (s)	43.0	35.0		43.0	35.0		41.5	34.5		40.5	34.0	
Actuated g/C Ratio	0.43	0.35		0.43	0.35		0.42	0.34		0.40	0.34	
Clearance Time (s)	3.0	3.5		3.0	3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	193	1467		193	1570		177	1540		170	1487	
v/s Ratio Prot	c0.09	c0.60		0.08	0.35		c0.09	c0.49		0.04	0.41	
v/s Ratio Perm	0.39			0.34			0.45			0.23		
v/c Ratio	1.13	1.72		0.97	1.00		1.31	1.43		0.68	1.20	
Uniform Delay, d1	23.5	32.5		48.0	32.5		48.7	32.8		47.1	33.0	
Progression Factor	0.86	0.84		1.50	0.96		1.72	0.83		1.00	1.00	
Incremental Delay, d2	88.8	327.6		51.7	21.9		155.8	197.3		8.1	96.6	
Delay (s)	109.0	354.8		123.9	53.2		239.8	224.6		55.2	129.6	
Level of Service	F	F		F	D		F	F		E	F	
Approach Delay (s)		335.7			60.7			226.0			125.1	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	206.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	132.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑↑↑		↕	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes		0.96			1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.94			0.99		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1497			1604		1583	4487		1583	4497	
Flt Permitted		0.88			0.33		0.06	1.00		0.06	1.00	
Satd. Flow (perm)		1322			538		106	4487		106	4497	
Volume (vph)	122	314	305	116	106	19	57	2095	116	23	1996	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	128	331	321	122	112	20	60	2205	122	24	2101	63
RTOR Reduction (vph)	0	5	0	0	3	0	0	6	0	0	3	0
Lane Group Flow (vph)	0	775	0	0	251	0	60	2321	0	24	2161	0
Conf. Peds. (#/hr)	29		64	64		29	102		42	42		102
Conf. Bikes (#/hr)			4			5			5			15
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0		63.2	63.2		63.2	63.2	
Effective Green, g (s)		29.0			29.0		63.0	63.0		63.0	63.0	
Actuated g/C Ratio		0.29			0.29		0.63	0.63		0.63	0.63	
Clearance Time (s)		3.0			3.0		3.8	3.8		3.8	3.8	
Vehicle Extension (s)		3.0			3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		383			156		67	2827		67	2833	
v/s Ratio Prot								0.52			0.48	
v/s Ratio Perm		c0.59			0.47		c0.57			0.23		
v/c Ratio		2.02			1.61		0.90	0.82		0.36	0.76	
Uniform Delay, d1		35.5			35.5		15.7	14.2		8.8	13.2	
Progression Factor		1.00			1.00		1.00	1.00		1.27	1.14	
Incremental Delay, d2		469.7			302.2		83.2	2.8		1.3	0.2	
Delay (s)		505.2			337.7		98.9	17.0		12.6	15.2	
Level of Service		F			F		F	B		B	B	
Approach Delay (s)		505.2			337.7			19.1			15.2	
Approach LOS		F			F			B			B	
Intersection Summary												
HCM Average Control Delay			99.6				HCM Level of Service			F		
HCM Volume to Capacity ratio			1.25									
Actuated Cycle Length (s)			100.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			109.9%				ICU Level of Service			H		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑↑		↖	↑↑↑		
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91		
Frt	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.97		
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1583	4507		1583	4532		1583	4519		1583	4435		
Flt Permitted	0.14	1.00		0.12	1.00		0.12	1.00		0.12	1.00		
Satd. Flow (perm)	236	4507		207	4532		200	4519		198	4435		
Volume (vph)	324	2442	165	86	1662	45	109	1855	87	242	1735	352	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	348	2626	177	92	1787	48	117	1995	94	260	1866	378	
RTOR Reduction (vph)	0	8	0	0	3	0	0	6	0	0	34	0	
Lane Group Flow (vph)	348	2795	0	92	1832	0	117	2083	0	260	2210	0	
Turn Type	Perm		pm+pt		pm+pt		pm+pt		pm+pt				
Protected Phases	6		5		2		3		8		7		4
Permitted Phases	6		2				8				4		
Actuated Green, G (s)	27.2	27.2		36.7	36.7		38.9	32.3		39.7	32.7		
Effective Green, g (s)	28.2	28.2		37.7	37.7		39.9	33.3		40.7	33.7		
Actuated g/C Ratio	0.31	0.31		0.42	0.42		0.44	0.37		0.45	0.37		
Clearance Time (s)	5.0	5.0		3.5	5.0		4.0	5.0		4.0	5.0		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	74	1412		171	1898		190	1672		197	1661		
v/s Ratio Prot		0.62		0.03	c0.40		0.05	0.46		c0.10	c0.50		
v/s Ratio Perm	c1.47			0.19			0.23			0.49			
v/c Ratio	4.70	1.98		0.54	0.97		0.62	1.25		1.32	1.33		
Uniform Delay, d1	30.9	30.9		42.1	25.5		21.2	28.4		43.7	28.1		
Progression Factor	1.41	1.42		1.00	1.00		1.49	0.44		1.00	1.00		
Incremental Delay, d2	1669.0	440.9		3.2	13.9		0.5	111.2		174.9	152.9		
Delay (s)	1712.6	484.7		45.4	39.4		32.2	123.7		218.6	181.0		
Level of Service	F	F		D	D		C	F		F	F		
Approach Delay (s)		620.3			39.7			118.8			184.9		
Approach LOS		F			D			F			F		

Intersection Summary

HCM Average Control Delay	281.6	HCM Level of Service	F
HCM Volume to Capacity ratio	2.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	132.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕		↔	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Fr _t	1.00	0.98		1.00	0.98		1.00	0.98		1.00	0.98	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3099		1583	3114		1583	4471		1583	4472	
Fl _t Permitted	0.29	1.00		0.13	1.00		0.12	1.00		0.14	1.00	
Satd. Flow (perm)	488	3099		222	3114		202	4471		230	4472	
Volume (vph)	184	1339	222	206	756	94	353	1796	233	118	1881	243
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	198	1440	239	222	813	101	380	1931	251	127	2023	261
RTOR Reduction (vph)	0	15	0	0	2	0	0	18	0	0	18	0
Lane Group Flow (vph)	198	1664	0	222	912	0	380	2164	0	127	2266	0
Turn Type	Perm		pm+pt		pm+pt		Perm		Perm		Perm	
Protected Phases	8		7		4		1		6		2	
Permitted Phases	8		4		6		6		2		2	
Actuated Green, G (s)	25.0	25.0		38.0	38.0		42.0	42.0		28.0	28.0	
Effective Green, g (s)	26.0	26.0		39.0	39.0		43.0	43.0		29.0	29.0	
Actuated g/C Ratio	0.29	0.29		0.43	0.43		0.48	0.48		0.32	0.32	
Clearance Time (s)	5.0	5.0		3.0	5.0		4.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	141	895		232	1349		250	2136		74	1441	
v/s Ratio Prot	c0.54		c0.10		0.29		c0.17		0.48		0.51	
v/s Ratio Perm	0.41		0.32		0.56		0.56		0.48		c0.55	
v/c Ratio	1.40	1.86		0.96	0.68		1.52	1.01		1.72	1.57	
Uniform Delay, d ₁	32.0	32.0		42.4	20.4		42.2	23.5		30.5	30.5	
Progression Factor	1.00	1.00		1.83	1.75		1.00	1.00		0.85	0.85	
Incremental Delay, d ₂	218.8	391.0		37.6	1.9		253.4	22.7		327.5	257.8	
Delay (s)	250.8	423.0		115.4	37.7		295.7	46.2		353.5	283.7	
Level of Service	F	F		F	D		F	D		F	F	
Approach Delay (s)	404.8		52.9		83.2		287.4		287.4		287.4	
Approach LOS	F		D		F		F		F		F	

Intersection Summary

HCM Average Control Delay	216.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	143.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.98		1.00	0.97		1.00	0.97		1.00	0.98	
Flpb, ped/bikes	0.96	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1523	3058		1568	3007		1583	2995		1583	3045	
Flt Permitted	0.23	1.00		0.10	1.00		0.10	1.00		0.09	1.00	
Satd. Flow (perm)	361	3058		172	3007		168	2995		152	3045	
Volume (vph)	140	1087	158	27	751	129	86	917	216	249	994	111
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	144	1121	163	28	774	133	89	945	223	257	1025	114
RTOR Reduction (vph)	0	9	0	0	12	0	0	17	0	0	7	0
Lane Group Flow (vph)	144	1275	0	28	895	0	89	1151	0	257	1132	0
Confl. Peds. (#/hr)	100		104	104		100	104		100	100		104
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	59.1	59.1		59.1	59.1		49.6	49.6		49.6	49.6	
Effective Green, g (s)	61.0	61.0		61.0	61.0		51.0	51.0		51.0	51.0	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.42	0.42		0.42	0.42	
Clearance Time (s)	5.9	5.9		5.9	5.9		5.4	5.4		5.4	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	184	1554		87	1529		71	1273		65	1294	
v/s Ratio Prot		c0.42			0.30			0.38			0.37	
v/s Ratio Perm	0.40			0.16			0.53			c1.69		
v/c Ratio	0.78	0.82		0.32	0.59		1.25	0.90		3.95	0.87	
Uniform Delay, d1	24.1	24.9		17.3	20.7		34.5	32.2		34.5	31.6	
Progression Factor	1.00	1.00		0.65	0.63		0.82	0.85		1.00	1.00	
Incremental Delay, d2	27.5	5.0		3.2	0.5		181.4	9.3		1365.3	8.5	
Delay (s)	51.6	29.9		14.5	13.6		209.7	36.6		1399.8	40.0	
Level of Service	D	C		B	B		F	D		F	D	
Approach Delay (s)		32.0			13.6			48.8			290.4	
Approach LOS		C			B			D			F	

Intersection Summary

HCM Average Control Delay	104.7	HCM Level of Service	F
HCM Volume to Capacity ratio	2.26		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1583	4504		1583	4542			1613			1635	
Flt Permitted	0.08	1.00		0.06	1.00			0.97			0.98	
Satd. Flow (perm)	131	4504		100	4542			1567			1611	
Volume (vph)	46	2326	167	71	1752	21	14	103	30	14	218	33
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	49	2501	180	76	1884	23	15	111	32	15	234	35
RTOR Reduction (vph)	0	8	0	0	1	0	0	5	0	0	5	0
Lane Group Flow (vph)	49	2673	0	76	1906	0	0	154	0	0	279	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	68.0	68.0		68.0	68.0			26.0			26.0	
Effective Green, g (s)	67.0	67.0		67.0	67.0			25.0			25.0	
Actuated g/C Ratio	0.67	0.67		0.67	0.67			0.25			0.25	
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0			3.0			3.0	
Lane Grp Cap (vph)	88	3018		67	3043			392			403	
v/s Ratio Prot		0.59			0.42							
v/s Ratio Perm	0.38			c0.76				0.10			c0.17	
v/c Ratio	0.56	0.89		1.13	0.63			0.39			0.69	
Uniform Delay, d1	8.7	13.4		16.5	9.4			31.2			34.0	
Progression Factor	0.55	0.61		0.85	0.49			1.00			1.00	
Incremental Delay, d2	2.3	0.4		76.6	0.1			2.9			9.4	
Delay (s)	7.1	8.6		90.5	4.7			34.1			43.4	
Level of Service	A	A		F	A			C			D	
Approach Delay (s)		8.5			8.0			34.1			43.4	
Approach LOS		A			A			C			D	

Intersection Summary

HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↘	↘	↑↑↑	↘	↘	↑	↘	↘	↘	↘
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3167	1417	1583	4550	1417	1583	1667	1417	1583	1645	
Flt Permitted	0.27	1.00	1.00	0.27	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	444	3167	1417	444	4550	1417	1583	1667	1417	1583	1645	
Volume (vph)	158	891	181	111	978	72	83	685	33	221	664	64
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	168	948	193	118	1040	77	88	729	35	235	706	68
RTOR Reduction (vph)	0	0	145	0	0	58	0	0	3	0	6	0
Lane Group Flow (vph)	168	948	48	118	1040	19	88	729	32	235	768	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4			4		1	2		1	6	
Permitted Phases	4		4	4		4			2			
Actuated Green, G (s)	14.0	14.0	14.0	14.0	14.0	14.0	4.0	28.2	28.2	4.0	28.2	
Effective Green, g (s)	15.0	15.0	15.0	15.0	15.0	15.0	4.0	29.0	29.0	4.0	29.0	
Actuated g/C Ratio	0.25	0.25	0.25	0.25	0.25	0.25	0.07	0.48	0.48	0.07	0.48	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.8	4.8	4.0	4.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	792	354	111	1138	354	106	806	685	106	795	
v/s Ratio Prot		0.30			0.23		0.06	0.44		c0.15	c0.47	
v/s Ratio Perm	c0.38		0.03	0.27		0.01			0.02			
v/c Ratio	1.51	1.20	0.14	1.06	0.91	0.05	0.83	0.90	0.05	2.22	0.97	
Uniform Delay, d1	22.5	22.5	17.5	22.5	21.9	17.1	27.7	14.2	8.2	28.0	15.0	
Progression Factor	1.00	1.00	1.00	1.29	1.28	1.22	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	271.7	100.8	0.8	96.8	11.1	0.2	39.8	15.5	0.1	577.0	24.7	
Delay (s)	294.2	123.3	18.3	125.9	39.0	21.2	67.4	29.8	8.3	605.0	39.8	
Level of Service	F	F	B	F	D	C	E	C	A	F	D	
Approach Delay (s)		129.7			46.2			32.8			171.4	
Approach LOS		F			D			C			F	

Intersection Summary

HCM Average Control Delay	97.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	103.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕		↖	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4500		1583	4532		1583	3079		1583	3136	
Flt Permitted	0.10	1.00		0.10	1.00		0.13	1.00		0.17	1.00	
Satd. Flow (perm)	161	4500		161	4532		218	3079		279	3136	
Volume (vph)	147	2451	195	220	1616	43	192	629	142	73	747	51
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	152	2527	201	227	1666	44	198	648	146	75	770	53
RTOR Reduction (vph)	0	9	0	0	3	0	0	19	0	0	5	0
Lane Group Flow (vph)	152	2719	0	227	1707	0	198	775	0	75	818	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	50.4	42.4		50.4	42.4		39.6	31.6		35.6	29.6	
Effective Green, g (s)	48.4	41.4		48.4	41.4		37.6	30.6		33.6	28.6	
Actuated g/C Ratio	0.48	0.41		0.48	0.41		0.38	0.31		0.34	0.29	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	177	1863		177	1876		178	942		159	897	
v/s Ratio Prot	0.06	c0.60		c0.09	0.38		c0.08	0.25		0.02	0.26	
v/s Ratio Perm	0.35			0.53			c0.34			0.14		
v/c Ratio	0.86	1.46		1.28	0.91		1.11	0.82		0.47	0.91	
Uniform Delay, d1	20.2	29.3		48.7	27.5		26.9	32.2		24.4	34.5	
Progression Factor	1.86	1.42		1.66	1.77		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.8	206.9		156.4	6.5		100.8	8.1		0.8	15.1	
Delay (s)	41.4	248.4		237.4	55.3		127.7	40.3		25.2	49.5	
Level of Service	D	F		F	E		F	D		C	D	
Approach Delay (s)		237.5			76.6			57.7			47.5	
Approach LOS		F			E			E			D	

Intersection Summary

HCM Average Control Delay	139.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	121.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4535		1583	4529		1583	3063		1583	3018	
Flt Permitted	0.11	1.00		0.10	1.00		0.14	1.00		0.17	1.00	
Satd. Flow (perm)	186	4535		175	4529		239	3063		275	3018	
Volume (vph)	78	2698	60	415	1515	49	224	854	239	50	660	302
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	83	2870	64	441	1612	52	238	909	254	53	702	321
RTOR Reduction (vph)	0	2	0	0	3	0	0	26	0	0	58	0
Lane Group Flow (vph)	83	2932	0	441	1661	0	238	1137	0	53	965	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	42.5	36.8		47.1	39.1		36.2	28.9		29.5	25.2	
Effective Green, g (s)	40.5	35.8		45.1	38.1		34.9	27.9		27.5	24.2	
Actuated g/C Ratio	0.45	0.40		0.50	0.42		0.39	0.31		0.31	0.27	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	157	1804		197	1917		197	950		132	812	
v/s Ratio Prot	0.03	0.65		c0.17	0.37		c0.09	0.37		0.01	0.32	
v/s Ratio Perm	0.21			c0.95			c0.37			0.11		
v/c Ratio	0.53	1.63		2.24	0.87		1.21	1.20		0.40	1.19	
Uniform Delay, d1	17.2	27.1		43.7	23.6		25.3	31.1		25.7	32.9	
Progression Factor	1.00	1.00		1.43	0.74		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	283.8		558.8	0.5		131.4	98.8		0.7	97.1	
Delay (s)	18.7	310.9		621.4	18.1		156.8	129.9		26.4	130.0	
Level of Service	B	F		F	B		F	F		C	F	
Approach Delay (s)		302.9			144.5			134.4			124.9	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	202.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	143.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑	↗	↗	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	4521		1583	4524		1583	1667	1417	1583	3069	
Flt Permitted	0.09	1.00		0.10	1.00		0.21	1.00	1.00	0.33	1.00	
Satd. Flow (perm)	154	4521		170	4524		343	1667	1417	552	3069	
Volume (vph)	250	2601	114	1	1875	74	109	373	36	15	490	127
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	266	2767	121	1	1995	79	116	397	38	16	521	135
RTOR Reduction (vph)	0	4	0	0	4	0	0	0	25	0	22	0
Lane Group Flow (vph)	266	2884	0	1	2070	0	116	397	13	16	634	0
Turn Type	pm+pt			pm+pt			pm+pt			Perm	pm+pt	
Protected Phases	5	2		1	6		3	8	8		7	4
Permitted Phases	2			6			8		8		4	
Actuated Green, G (s)	54.2	50.2		41.2	40.2		39.8	34.5	34.5	33.1	30.8	
Effective Green, g (s)	53.2	49.2		39.2	39.2		38.5	33.5	33.5	31.1	29.8	
Actuated g/C Ratio	0.53	0.49		0.39	0.39		0.38	0.34	0.34	0.31	0.30	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	225	2224		67	1773		194	558	475	185	915	
v/s Ratio Prot	c0.12	c0.64			0.46		c0.03	c0.24		0.00	0.21	
v/s Ratio Perm	0.51			0.01			0.20		0.01	0.03		
v/c Ratio	1.18	1.30		0.01	1.17		0.60	0.71	0.03	0.09	0.69	
Uniform Delay, d1	47.2	25.4		18.6	30.4		22.0	29.0	22.3	24.6	31.0	
Progression Factor	0.81	1.12		1.73	1.74		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	112.3	136.3		0.0	78.7		3.3	7.5	0.1	0.1	4.3	
Delay (s)	150.5	164.9		32.1	131.6		25.3	36.5	22.4	24.7	35.3	
Level of Service	F	F		C	F		C	D	C	C	D	
Approach Delay (s)		163.7			131.5			33.2			35.1	
Approach LOS		F			F			C			D	

Intersection Summary

HCM Average Control Delay	128.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↗	↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	2227		1118	2223		1118	2200		1118	2216	
Flt Permitted	0.07	1.00		0.07	1.00		0.38	1.00		0.26	1.00	
Satd. Flow (perm)	77	2227		77	2223		443	2200		307	2216	
Volume (vph)	13	2285	61	78	1886	72	91	467	55	100	377	23
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	13	2356	63	80	1944	74	94	481	57	103	389	24
RTOR Reduction (vph)	0	2	0	0	3	0	0	7	0	0	5	0
Lane Group Flow (vph)	13	2417	0	80	2015	0	94	531	0	103	408	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	60.5	60.5		60.5	60.5		20.8	20.8		20.8	20.8	
Effective Green, g (s)	61.0	61.0		61.0	61.0		21.0	21.0		21.0	21.0	
Actuated g/C Ratio	0.68	0.68		0.68	0.68		0.23	0.23		0.23	0.23	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	52	1509		52	1507		103	513		72	517	
v/s Ratio Prot	c1.09				0.91		0.24				0.18	
v/s Ratio Perm	0.17			1.04			0.21			c0.34		
v/c Ratio	0.25	1.60		1.54	1.34		0.91	1.04		1.43	0.79	
Uniform Delay, d1	5.6	14.5		14.5	14.5		33.6	34.5		34.5	32.4	
Progression Factor	0.50	0.39		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	271.1		317.7	156.3		67.3	49.1		256.5	11.7	
Delay (s)	3.8	276.7		332.2	170.8		100.9	83.6		291.0	44.1	
Level of Service	A	F		F	F		F	F		F	D	
Approach Delay (s)	275.2				177.0		86.2				93.4	
Approach LOS	F				F		F				F	

Intersection Summary

HCM Average Control Delay	201.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	145.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						0.95			0.95	
Frbp, ped/bikes		0.99						0.99			1.00	
Flpb, ped/bikes		1.00						1.00			1.00	
Frt		0.99						0.98			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		3058						3088			3130	
Flt Permitted		0.99						1.00			0.78	
Satd. Flow (perm)		3058						3088			2446	
Volume (vph)	158	547	76	0	0	0	0	413	51	71	410	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	172	595	83	0	0	0	0	449	55	77	446	0
RTOR Reduction (vph)	0	8	0	0	0	0	0	15	0	0	0	0
Lane Group Flow (vph)	0	842	0	0	0	0	0	489	0	0	523	0
Conf. Peds. (#/hr)	5		38					63		59	59	63
Conf. Bikes (#/hr)			5							1		1
Turn Type	Perm						Perm					
Protected Phases		2						8			4	
Permitted Phases	2								4			
Actuated Green, G (s)		37.0						17.0			17.0	
Effective Green, g (s)		36.0						16.0			16.0	
Actuated g/C Ratio		0.60						0.27			0.27	
Clearance Time (s)		3.0						3.0			3.0	
Vehicle Extension (s)		5.0						3.0			3.0	
Lane Grp Cap (vph)		1835						823			652	
v/s Ratio Prot								0.16				
v/s Ratio Perm		0.28									c0.21	
v/c Ratio		0.46						0.59			0.80	
Uniform Delay, d1		6.6						19.2			20.5	
Progression Factor		0.66						1.00			1.00	
Incremental Delay, d2		0.4						3.1			10.1	
Delay (s)		4.7						22.3			30.6	
Level of Service		A						C			C	
Approach Delay (s)		4.7			0.0			22.3			30.6	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM Average Control Delay		16.7			HCM Level of Service				B			
HCM Volume to Capacity ratio		0.56										
Actuated Cycle Length (s)		60.0			Sum of lost time (s)				8.0			
Intersection Capacity Utilization		65.1%			ICU Level of Service				C			
Analysis Period (min)		15										
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑				↗		↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0				4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91				1.00		1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99				0.94		1.00	0.92
Flpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		0.95	1.00
Frt	1.00	1.00		1.00	0.98				0.86		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00				1.00		0.95	1.00
Satd. Flow (prot)	1583	4522		1583	4393				1355		1513	1302
Flt Permitted	0.95	1.00		0.95	1.00				1.00		0.95	1.00
Satd. Flow (perm)	1583	4522		1583	4393				1355		1513	1302
Volume (vph)	138	1968	46	13	1704	301	0	0	84	349	10	259
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	144	2050	48	14	1775	314	0	0	88	364	10	270
RTOR Reduction (vph)	0	2	0	0	25	0	0	0	63	0	0	111
Lane Group Flow (vph)	144	2096	0	14	2064	0	0	0	25	0	374	159
Confl. Peds. (#/hr)	26		44	44		26	50		36	36		50
Confl. Bikes (#/hr)			5			6						3
Turn Type	Prot			Prot				custom	Perm		Perm	
Protected Phases	5	2		1	6						4	
Permitted Phases								8	4			4
Actuated Green, G (s)	10.9	60.0		2.0	51.1			29.0			29.0	29.0
Effective Green, g (s)	9.9	59.0		1.0	50.1			28.0			28.0	28.0
Actuated g/C Ratio	0.10	0.59		0.01	0.50			0.28			0.28	0.28
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Vehicle Extension (s)	2.0	5.0		2.0	5.0			3.0			3.0	3.0
Lane Grp Cap (vph)	157	2668		16	2201			379			424	365
v/s Ratio Prot	c0.09	0.46		0.01	c0.47							
v/s Ratio Perm								0.02			0.25	0.12
v/c Ratio	0.92	0.79		0.88	0.94			0.07			0.88	0.44
Uniform Delay, d1	44.6	15.7		49.4	23.5			26.4			34.4	29.5
Progression Factor	1.00	1.00		0.62	1.73			1.00			1.00	1.00
Incremental Delay, d2	47.0	2.4		33.9	1.1			0.3			22.3	3.8
Delay (s)	91.7	18.1		64.6	41.7			26.7			56.8	33.3
Level of Service	F	B		E	D			C			E	C
Approach Delay (s)		22.8			41.9			26.7			46.9	
Approach LOS		C			D			C			D	
Intersection Summary												
HCM Average Control Delay			33.8			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.92									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			92.1%			ICU Level of Service		F				
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	2228		1118	2228		1118	2176		1118	2201	
Flt Permitted	0.07	1.00		0.07	1.00		0.17	1.00		0.17	1.00	
Satd. Flow (perm)	81	2228		81	2228		196	2176		196	2201	
Volume (vph)	51	2133	48	100	1868	42	79	824	178	57	642	72
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	53	2222	50	104	1946	44	82	858	185	59	669	75
RTOR Reduction (vph)	0	2	0	0	2	0	0	7	0	0	10	0
Lane Group Flow (vph)	53	2270	0	104	1988	0	82	1036	0	59	734	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	57.5	57.5		57.5	57.5		23.8	23.8		23.8	23.8	
Effective Green, g (s)	58.0	58.0		58.0	58.0		24.0	24.0		24.0	24.0	
Actuated g/C Ratio	0.64	0.64		0.64	0.64		0.27	0.27		0.27	0.27	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	52	1436		52	1436		52	580		52	587	
v/s Ratio Prot		1.02			0.89			c0.48			0.33	
v/s Ratio Perm	0.65			c1.28			0.42			0.30		
v/c Ratio	1.02	1.58		2.00	1.38		1.58	1.79		1.13	1.25	
Uniform Delay, d1	16.0	16.0		16.0	16.0		33.0	33.0		33.0	33.0	
Progression Factor	1.00	1.00		0.61	0.59		0.52	0.48		1.00	1.00	
Incremental Delay, d2	130.4	264.8		456.1	173.5		267.9	354.7		166.6	126.7	
Delay (s)	146.4	280.8		465.8	182.9		284.9	370.7		199.6	159.7	
Level of Service	F	F		F	F		F	F		F	F	
Approach Delay (s)		277.7			196.9			364.5			162.6	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	251.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	167.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00		0.95	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1118	2202		1118	2226		1118	2235	1000		2203	
Flt Permitted	0.17	1.00		0.08	1.00		0.19	1.00	1.00		1.00	
Satd. Flow (perm)	200	2202		94	2226		222	2235	1000		2203	
Volume (vph)	108	1641	180	70	1052	30	82	915	192	0	707	74
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	114	1727	189	74	1107	32	86	963	202	0	744	78
RTOR Reduction (vph)	0	9	0	0	2	0	0	0	10	0	9	0
Lane Group Flow (vph)	114	1907	0	74	1137	0	86	963	192	0	813	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	49.5	49.5		49.5	49.5		31.8	31.8	31.8		31.8	
Effective Green, g (s)	50.0	50.0		50.0	50.0		32.0	32.0	32.0		32.0	
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.36	0.36	0.36		0.36	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2	4.2		4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	111	1223		52	1237		79	795	356		783	
v/s Ratio Prot	c0.87				0.51		c0.43				0.37	
v/s Ratio Perm	0.57		0.79				0.39		0.19			
v/c Ratio	1.03	1.56		1.42	0.92		1.09	1.21	0.54		1.04	
Uniform Delay, d1	20.0	20.0		20.0	18.2		29.0	29.0	23.1		29.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		0.58	
Incremental Delay, d2	92.9	255.6		271.9	12.3		127.5	106.7	5.7		21.7	
Delay (s)	112.9	275.6		291.9	30.5		156.5	135.7	28.9		38.4	
Level of Service	F	F		F	C		F	F	C		D	
Approach Delay (s)	266.5				46.4		119.8				38.4	
Approach LOS	F				D		F				D	
Intersection Summary												
HCM Average Control Delay	146.5		HCM Level of Service		F							
HCM Volume to Capacity ratio	1.42											
Actuated Cycle Length (s)	90.0		Sum of lost time (s)		8.0							
Intersection Capacity Utilization	144.4%		ICU Level of Service		H							
Analysis Period (min)	15											
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						0.95			0.95	
Frbp, ped/bikes		1.00						0.97			1.00	
Flpb, ped/bikes		0.99						1.00			1.00	
Frt		0.97						0.98			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		2996						2992			3144	
Flt Permitted		0.99						1.00			0.65	
Satd. Flow (perm)		2996						2992			2039	
Volume (vph)	159	464	167	0	0	0	0	913	174	97	885	0
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	185	540	194	0	0	0	0	1062	202	113	1029	0
RTOR Reduction (vph)	0	40	0	0	0	0	0	26	0	0	0	0
Lane Group Flow (vph)	0	879	0	0	0	0	0	1238	0	0	1142	0
Conf. Peds. (#/hr)	60								223	223		
Conf. Bikes (#/hr)			1							3		
Turn Type	Perm						Perm					
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		21.0						33.0			33.0	
Effective Green, g (s)		20.0						32.0			32.0	
Actuated g/C Ratio		0.33						0.53			0.53	
Clearance Time (s)		3.0						3.0			3.0	
Vehicle Extension (s)		3.0						3.0			3.0	
Lane Grp Cap (vph)		999						1596			1087	
v/s Ratio Prot								0.41				
v/s Ratio Perm		0.29									c0.56	
v/c Ratio		0.88						0.78			1.05	
Uniform Delay, d1		18.9						11.1			14.0	
Progression Factor		1.41						1.00			1.00	
Incremental Delay, d2		5.7						3.8			41.6	
Delay (s)		32.4						14.9			55.6	
Level of Service		C						B			E	
Approach Delay (s)		32.4			0.0			14.9			55.6	
Approach LOS		C			A			B			E	
Intersection Summary												
HCM Average Control Delay			33.7					HCM Level of Service			C	
HCM Volume to Capacity ratio			0.98									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)		8.0		
Intersection Capacity Utilization			101.6%					ICU Level of Service		G		
Analysis Period (min)			15									
c	Critical Lane Group											



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗		↗	↗↗	↗		↗↗	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00		0.95	1.00
Frbp, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	0.80		1.00	0.84
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1583	4392		1583	4406		1583	3167	1133		3167	1189
Flt Permitted	0.09	1.00		0.09	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	148	4392		154	4406		1583	3167	1133		3167	1189
Volume (vph)	133	2140	173	198	1668	137	299	1017	66	0	993	356
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	141	2277	184	211	1774	146	318	1082	70	0	1056	379
RTOR Reduction (vph)	0	9	0	0	9	0	0	0	45	0	0	101
Lane Group Flow (vph)	141	2452	0	211	1911	0	318	1082	25	0	1056	278
Conf. Peds. (#/hr)	195		257	257		195	112		142	142		112
Conf. Bikes (#/hr)			9			5			5			3
Turn Type	pm+pt			pm+pt			Prot		Perm			Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases	2			6				8				4
Actuated Green, G (s)	54.6	46.0		51.4	44.4		9.9	35.9	35.9		22.9	22.9
Effective Green, g (s)	52.6	45.0		49.4	43.4		9.0	35.0	35.0		22.0	22.0
Actuated g/C Ratio	0.54	0.46		0.50	0.44		0.09	0.36	0.36		0.22	0.22
Clearance Time (s)	3.0	3.0		3.0	3.0		3.1	3.1	3.1		3.1	3.1
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	191	2017		165	1951		145	1131	405		711	267
v/s Ratio Prot	c0.06	0.56		c0.08	0.43		c0.20	0.34			c0.33	
v/s Ratio Perm	0.34			c0.57					0.02			0.23
v/c Ratio	0.74	1.22		1.28	0.98		2.19	0.96	0.06		1.49	1.04
Uniform Delay, d1	18.9	26.5		48.2	26.9		44.5	30.8	20.7		38.0	38.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	12.1	101.8		163.8	16.0		558.8	18.2	0.3		225.8	66.4
Delay (s)	31.0	128.3		212.0	42.9		603.3	48.9	21.0		263.8	104.4
Level of Service	C	F		F	D		F	D	C		F	F
Approach Delay (s)		123.0			59.6			167.5			221.7	
Approach LOS		F			E			F			F	

Intersection Summary			
HCM Average Control Delay	132.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	98.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	125.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕		↕	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.96			0.97		1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3011			3038		1583	3139		1583	3148	
Flt Permitted		0.83			0.72		0.09	1.00		0.09	1.00	
Satd. Flow (perm)		2507			2226		146	3139		148	3148	
Volume (vph)	62	230	114	81	209	72	84	1218	75	68	1208	50
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	68	253	125	89	230	79	92	1338	82	75	1327	55
RTOR Reduction (vph)	0	45	0	0	24	0	0	4	0	0	3	0
Lane Group Flow (vph)	0	401	0	0	374	0	92	1416	0	75	1379	0
Turn Type		Perm		Perm		pm+pt		pm+pt		pm+pt		
Protected Phases		4		8		5		2		1		6
Permitted Phases		4		8		2				6		
Actuated Green, G (s)		29.0		29.0		52.5		46.6		51.5		46.1
Effective Green, g (s)		28.0		28.0		50.5		45.6		49.5		45.1
Actuated g/C Ratio		0.31		0.31		0.56		0.51		0.55		0.50
Clearance Time (s)		3.0		3.0		3.0		3.0		3.0		3.0
Vehicle Extension (s)		3.0		3.0		2.0		5.0		2.0		5.0
Lane Grp Cap (vph)		780		693		160		1590		152		1577
v/s Ratio Prot						c0.03		c0.45		0.02		0.44
v/s Ratio Perm		0.16		c0.17		0.29				0.25		
v/c Ratio		0.51		0.54		0.57		0.89		0.49		0.87
Uniform Delay, d1		25.4		25.7		14.6		20.0		14.7		19.9
Progression Factor		1.00		1.00		1.00		1.00		1.00		1.00
Incremental Delay, d2		2.4		0.8		3.1		7.9		0.9		7.1
Delay (s)		27.8		26.5		17.7		27.9		15.6		27.0
Level of Service		C		C		B		C		B		C
Approach Delay (s)		27.8		26.5				27.3				26.4
Approach LOS		C		C				C				C

Intersection Summary

HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↘		↖	↗↘		↖	↗↘			↗↘	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95			0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.96			0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1583	4533		1583	4550		1583	3030			3078	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1583	4533		1583	4550		1583	3030			3078	
Volume (vph)	64	2947	76	46	2317	0	5	320	129	0	601	138
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	67	3070	79	48	2414	0	5	333	134	0	626	144
RTOR Reduction (vph)	0	3	0	0	0	0	0	48	0	0	22	0
Lane Group Flow (vph)	67	3146	0	48	2414	0	5	419	0	0	748	0
Turn Type	Prot		Prot		Split							
Protected Phases	1!	2!		5!	6!		8	8			7	
Permitted Phases												
Actuated Green, G (s)	7.4	32.2		5.5	33.1		13.9	13.9			21.5	
Effective Green, g (s)	6.9	31.7		5.5	33.1		13.9	13.9			21.5	
Actuated g/C Ratio	0.08	0.35		0.06	0.37		0.15	0.15			0.24	
Clearance Time (s)	3.5	3.5		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	121	1597		97	1673		244	468			735	
v/s Ratio Prot	c0.04	c0.69		0.03	0.53		0.00	c0.14			c0.24	
v/s Ratio Perm												
v/c Ratio	0.55	1.97		0.49	1.44		0.02	0.89			1.02	
Uniform Delay, d1	40.1	29.1		40.9	28.4		32.3	37.3			34.2	
Progression Factor	1.25	0.53		1.54	0.30		1.00	1.00			1.00	
Incremental Delay, d2	0.5	436.8		0.4	199.6		0.0	19.2			37.7	
Delay (s)	50.6	452.2		63.3	208.2		32.3	56.5			71.9	
Level of Service	D	F		E	F		C	E			E	
Approach Delay (s)		443.9			205.4			56.3			71.9	
Approach LOS		F			F			E			E	

Intersection Summary

HCM Average Control Delay	291.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	95.7%	ICU Level of Service	F
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↓		↑	↑↑↓		↑	↑↓		↑	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt		0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4519		1583	4519		1583	3161		1583	3167	
Flt Permitted		1.00		0.95	1.00		0.19	1.00		0.19	1.00	
Satd. Flow (perm)		4519		1583	4519		310	3161		310	3167	
Volume (vph)	0	2936	140	15	2254	107	109	823	10	36	911	0
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	3027	144	15	2324	110	112	848	10	37	939	0
RTOR Reduction (vph)	0	5	0	0	5	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	3166	0	15	2429	0	112	857	0	37	939	0
Turn Type				Prot			Perm			Perm		
Protected Phases		2!		5!	6			7			7	
Permitted Phases							7			7		
Actuated Green, G (s)		32.2		5.5	33.1		21.5	21.5		21.5	21.5	
Effective Green, g (s)		31.7		5.5	33.1		21.5	21.5		21.5	21.5	
Actuated g/C Ratio		0.35		0.06	0.37		0.24	0.24		0.24	0.24	
Clearance Time (s)		3.5		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1592		97	1662		74	755		74	757	
v/s Ratio Prot		c0.70		c0.01	0.54			0.27			0.30	
v/s Ratio Perm							c0.36			0.12		
v/c Ratio		1.99		0.15	1.46		1.51	1.14		0.50	1.24	
Uniform Delay, d1		29.1		40.0	28.4		34.2	34.2		29.6	34.2	
Progression Factor		0.29		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		445.1		0.7	211.0		288.5	76.8		22.1	119.3	
Delay (s)		453.5		40.8	239.5		322.8	111.0		51.7	153.6	
Level of Service		F		D	F		F	F		D	F	
Approach Delay (s)		453.5			238.3			135.5			149.7	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	303.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	29.9
Intersection Capacity Utilization	111.8%	ICU Level of Service	H
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕		↗	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0		4.0	4.0	
Lane Util. Factor		0.95						0.95		1.00	0.95	
Frbp, ped/bikes		0.99						0.95		1.00	1.00	
Flpb, ped/bikes		0.93						1.00		0.84	1.00	
Frt		0.99						0.98		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		2859						2934		1333	3167	
Flt Permitted		0.99						1.00		0.40	1.00	
Satd. Flow (perm)		2859						2934		558	3167	
Volume (vph)	177	596	31	0	0	0	0	372	67	89	624	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	186	627	33	0	0	0	0	392	71	94	657	0
RTOR Reduction (vph)	0	5	0	0	0	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	841	0	0	0	0	0	438	0	94	657	0
Conf. Peds. (#/hr)	173		248	248			173	221		404	404	221
Conf. Bikes (#/hr)			3				2			1		4
Turn Type		Perm									Perm	
Protected Phases		2						4			4	
Permitted Phases		2									4	
Actuated Green, G (s)		17.0						17.0		17.0	17.0	
Effective Green, g (s)		16.0						16.0		16.0	16.0	
Actuated g/C Ratio		0.27						0.27		0.27	0.27	
Clearance Time (s)		3.0						3.0		3.0	3.0	
Vehicle Extension (s)		5.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		762						782		149	845	
v/s Ratio Prot								0.15			c0.21	
v/s Ratio Perm		0.29								0.17		
v/c Ratio		1.10						0.56		0.63	0.78	
Uniform Delay, d1		22.0						19.0		19.4	20.4	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		64.7						2.9		18.6	7.0	
Delay (s)		86.7						21.9		38.0	27.3	
Level of Service		F						C		D	C	
Approach Delay (s)		86.7			0.0			21.9			28.6	
Approach LOS		F			A			C			C	
Intersection Summary												
HCM Average Control Delay			51.0					HCM Level of Service			D	
HCM Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)		28.0		
Intersection Capacity Utilization			81.0%					ICU Level of Service			D	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖			↖↖↖		↖	↖		↖	↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91			0.91		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00			0.97		1.00	0.87		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			1.00		0.86	1.00		1.00	1.00	1.00
Frt	1.00	1.00			0.99		1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4521			4377		1360	1353		1583	1667	1102
Flt Permitted	0.08	1.00			1.00		0.58	1.00		0.95	1.00	1.00
Satd. Flow (perm)	142	4521			4377		828	1353		1583	1667	1102
Volume (vph)	100	2231	29	0	2221	202	111	97	82	168	291	146
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	102	2277	30	0	2266	206	113	99	84	171	297	149
RTOR Reduction (vph)	0	1	0	0	12	0	0	0	0	0	0	0
Lane Group Flow (vph)	102	2306	0	0	2460	0	113	183	0	171	297	149
Conf. Peds. (#/hr)	244		131	131		244	166		211	211		166
Conf. Bikes (#/hr)			3			5			2			3
Turn Type	Perm			Perm			Prot		custom			
Protected Phases	2		6			8		7				
Permitted Phases	2					8		4 4				
Actuated Green, G (s)	48.1	48.1			48.1	21.0	21.0		11.9	35.9	35.9	
Effective Green, g (s)	47.1	47.1			47.1	20.0	20.0		10.9	34.9	34.9	
Actuated g/C Ratio	0.52	0.52			0.52	0.22	0.22		0.12	0.39	0.39	
Clearance Time (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0	3.0	
Vehicle Extension (s)	5.0	5.0			5.0	3.0	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	74	2366			2291	184	301		192	646	427	
v/s Ratio Prot		0.51			0.56		0.14		c0.11			
v/s Ratio Perm	c0.72					c0.14				0.18	0.14	
v/c Ratio	1.38	0.97			1.07	0.61	0.61		0.89	0.46	0.35	
Uniform Delay, d1	21.4	20.9			21.4	31.5	31.5		39.0	20.5	19.5	
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	234.6	13.4			42.2	14.4	8.8		36.2	2.3	2.2	
Delay (s)	256.0	34.3			63.7	45.9	40.3		75.2	22.9	21.7	
Level of Service	F	C			E	D	D		E	C	C	
Approach Delay (s)		43.7			63.7		42.4			37.1		
Approach LOS		D			E		D			D		

Intersection Summary			
HCM Average Control Delay	51.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR2
Lane Configurations		↔	↔↔↔		↔	↔↔↔			↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0			4.0
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frbp, ped/bikes		1.00	0.98		1.00	0.97			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.98			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1583	4437		1583	4321			1442
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1583	4437		1583	4321			1442
Volume (vph)	220	583	2192	121	588	1461	110	69	289
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	227	601	2260	125	606	1506	113	71	298
RTOR Reduction (vph)	0	0	6	0	0	0	0	0	262
Lane Group Flow (vph)	0	828	2379	0	606	1690	0	0	36
Confl. Peds. (#/hr)	99	154		137	137		99	154	155
Confl. Bikes (#/hr)				6			7	10	2
Turn Type	Prot	Prot			Prot				custom
Protected Phases	1	1	2		8	6			1
Permitted Phases									
Actuated Green, G (s)		13.0	52.0		26.0	81.0			13.0
Effective Green, g (s)		12.0	51.0		25.0	80.0			12.0
Actuated g/C Ratio		0.12	0.51		0.25	0.80			0.12
Clearance Time (s)		3.0	3.0		3.0	3.0			3.0
Vehicle Extension (s)		2.5	5.0		3.0	5.0			2.5
Lane Grp Cap (vph)		190	2263		396	3457			173
v/s Ratio Prot		c0.52	c0.54		c0.38	0.39			0.02
v/s Ratio Perm									
v/c Ratio		4.36	1.05		1.53	0.49			0.21
Uniform Delay, d1		44.0	24.5		37.5	3.3			39.7
Progression Factor		1.17	1.52		1.00	1.00			1.00
Incremental Delay, d2		1512.2	24.5		251.1	0.5			0.4
Delay (s)		1563.8	61.8		288.6	3.8			40.1
Level of Service		F	E		F	A			D
Approach Delay (s)			448.9			79.0			
Approach LOS			F			E			
Intersection Summary									
HCM Average Control Delay			281.6			HCM Level of Service			F
HCM Volume to Capacity ratio			1.64						
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			12.0
Intersection Capacity Utilization			93.8%			ICU Level of Service			F
Analysis Period (min)			15						
c Critical Lane Group									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↖↗↘		↗	↖↗↘			↕	↗		↖↗↘	↗
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	0.86	0.86		1.00	0.91			0.95	1.00		0.86	0.86
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.98	0.85
Flt Protected	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	961	3001		1118	3209			2235	1000		2981	860
Flt Permitted	0.95	0.69		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	961	2096		1118	3209			2235	1000		2981	860
Volume (vph)	758	1561	24	208	1810	10	0	1141	597	0	1341	955
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	861	1774	27	236	2057	11	0	1297	678	0	1524	1085
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	212	0	16	325
Lane Group Flow (vph)	440	2221	0	236	2067	0	0	1297	466	0	1714	554
Turn Type	Prot		Prot				Perm				Over	
Protected Phases	7	4		3	8			2			6	7
Permitted Phases							2					
Actuated Green, G (s)	15.9	41.4		14.9	40.4			29.4	29.4		29.4	15.9
Effective Green, g (s)	17.0	42.0		16.0	41.0			30.0	30.0		30.0	17.0
Actuated g/C Ratio	0.17	0.42		0.16	0.41			0.30	0.30		0.30	0.17
Clearance Time (s)	5.1	4.6		5.1	4.6			4.6	4.6		4.6	5.1
Vehicle Extension (s)	3.0	3.0		5.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	163	1034		179	1316			671	300		894	146
v/s Ratio Prot	0.46	0.37		0.21	c0.64			c0.58			0.57	c0.64
v/s Ratio Perm	c0.54						0.47					
v/c Ratio	2.70	2.15		1.32	1.57			1.93	1.55		1.92	3.80
Uniform Delay, d1	41.5	29.0		42.0	29.5			35.0	35.0		35.0	41.5
Progression Factor	1.00	1.00		1.16	0.59			1.00	1.00		1.00	1.00
Incremental Delay, d2	781.9	519.8		154.4	258.0			425.3	264.7		416.9	1275.5
Delay (s)	823.4	548.8		203.3	275.3			460.3	299.7		451.9	1317.0
Level of Service	F	F		F	F			F	F		F	F
Approach Delay (s)	594.1		267.9				405.2				743.3	
Approach LOS	F		F				F				F	

Intersection Summary

HCM Average Control Delay	517.1	HCM Level of Service	F
HCM Volume to Capacity ratio	2.36		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	172.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↑	↑↑↑		↑	↑↑	↑	↑	↑↑	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frt		1.00		1.00	1.00		1.00	1.00	0.85	1.00	0.93	
Flt Protected		0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3177		1118	3205		1118	2235	1000	1118	2081	
Flt Permitted		0.67		0.95	1.00		0.13	1.00	1.00	0.14	1.00	
Satd. Flow (perm)		2159		1118	3205		157	2235	1000	160	2081	
Volume (vph)	489	1840	10	355	1350	21	10	804	334	28	600	514
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	499	1878	10	362	1378	21	10	820	341	29	612	524
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	209	0	155	0
Lane Group Flow (vph)	0	2386	0	362	1397	0	10	820	132	29	981	0
Turn Type		Prot		Prot		Perm		Perm		Perm		
Protected Phases		7	4	3	8			2				6
Permitted Phases							2		2		6	
Actuated Green, G (s)		41.4		14.9	40.4		29.4	29.4	29.4	29.4	29.4	
Effective Green, g (s)		42.0		16.0	41.0		30.0	30.0	30.0	30.0	30.0	
Actuated g/C Ratio		0.42		0.16	0.41		0.30	0.30	0.30	0.30	0.30	
Clearance Time (s)		4.6		5.1	4.6		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)		3.0		5.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1080		179	1314		47	671	300	48	624	
v/s Ratio Prot		c0.38		c0.32	0.44			0.37			c0.47	
v/s Ratio Perm		c0.55					0.06		0.13	0.18		
v/c Ratio		2.21		2.02	1.06		0.21	1.22	0.44	0.60	1.57	
Uniform Delay, d1		29.0		42.0	29.5		26.2	35.0	28.2	29.9	35.0	
Progression Factor		0.80		0.93	1.45		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		544.6		477.8	42.7		10.1	113.0	4.6	45.6	265.4	
Delay (s)		567.9		516.9	85.4		36.2	148.0	32.8	75.5	300.4	
Level of Service		F		F	F		D	F	C	E	F	
Approach Delay (s)		567.9			174.1			113.5			294.8	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	329.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	176.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.86	0.97	0.88
Frbp, ped/bikes		1.00	0.94	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)		4047	940	2168	4047	2168	1760
Flt Permitted		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)		4047	940	2168	4047	2168	1760
Volume (vph)	0	2227	263	536	1658	394	1171
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	2296	271	553	1709	406	1207
RTOR Reduction (vph)	0	0	65	0	0	0	680
Lane Group Flow (vph)	0	2296	206	553	1709	406	527
Conf. Peds. (#/hr)			60	60		1	4
Conf. Bikes (#/hr)			23				4
Turn Type	Prot		pm+ov	Prot			Over
Protected Phases	1	6	4	3	2 3	4	3
Permitted Phases			6				
Actuated Green, G (s)		47.4	73.1	31.0	84.4	25.7	31.0
Effective Green, g (s)		49.4	78.0	30.0	83.4	28.6	30.0
Actuated g/C Ratio		0.41	0.65	0.25	0.70	0.24	0.25
Clearance Time (s)		6.0	6.9	3.0		6.9	3.0
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1666	642	542	2813	517	440
v/s Ratio Prot		c0.57	0.08	0.26	0.42	c0.19	c0.30
v/s Ratio Perm			0.14				
v/c Ratio		1.38	0.32	1.02	0.61	0.79	1.20
Uniform Delay, d1		35.3	9.3	45.0	9.7	42.8	45.0
Progression Factor		0.88	3.10	1.00	1.00	1.00	1.00
Incremental Delay, d2		171.4	0.1	43.9	0.4	7.7	108.9
Delay (s)		202.6	28.9	88.9	10.0	50.5	153.9
Level of Service		F	C	F	B	D	F
Approach Delay (s)		184.2			29.3	127.9	
Approach LOS		F			C	F	
Intersection Summary							
HCM Average Control Delay			115.7		HCM Level of Service		F
HCM Volume to Capacity ratio			1.17				
Actuated Cycle Length (s)			120.0		Sum of lost time (s)		12.0
Intersection Capacity Utilization			123.1%		ICU Level of Service		H
Analysis Period (min)			15				
c Critical Lane Group							



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘		↖		↖	↑↑↑		↖	↑↑	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0				4.0	4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	0.88				1.00	0.91			0.95	1.00
Frt	1.00	1.00	0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1504	1504	2493				1583	4550			3167	1417
Flt Permitted	0.95	0.95	1.00				0.10	1.00			1.00	1.00
Satd. Flow (perm)	1504	1504	2493				160	4550			3167	1417
Volume (vph)	580	0	672	0	0	0	157	560	0	0	1117	221
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	659	0	764	0	0	0	178	636	0	0	1269	251
RTOR Reduction (vph)	0	0	635	0	0	0	0	0	0	0	0	177
Lane Group Flow (vph)	330	329	129	0	0	0	178	636	0	0	1269	74
Turn Type	Split		custom				pm+pt			Perm		Over
Protected Phases	4	4	7 1		3		5	2			6	4
Permitted Phases							2			6		
Actuated Green, G (s)	16.5	16.5	14.6				45.5	40.5			40.5	16.5
Effective Green, g (s)	17.1	17.1	15.2				46.7	41.7			41.7	17.1
Actuated g/C Ratio	0.19	0.19	0.17				0.52	0.46			0.46	0.19
Clearance Time (s)	4.6	4.6					4.0	5.2			5.2	4.6
Vehicle Extension (s)	3.0	3.0					3.0	3.2			3.4	3.0
Lane Grp Cap (vph)	286	286	421				162	2108			1467	269
v/s Ratio Prot	c0.22	0.22	c0.05				c0.06	0.14			0.40	0.05
v/s Ratio Perm							c0.51					
v/c Ratio	1.15	1.15	0.31				1.10	0.30			0.87	0.28
Uniform Delay, d1	36.5	36.5	32.8				17.6	15.1			21.6	31.2
Progression Factor	1.01	1.01	5.49				2.28	1.12			1.00	1.00
Incremental Delay, d2	99.4	98.1	0.4				83.6	0.2			7.0	2.5
Delay (s)	136.2	134.9	180.2				123.7	17.1			28.7	33.7
Level of Service	F	F	F				F	B			C	C
Approach Delay (s)		159.5			0.0			40.4			29.5	
Approach LOS		F			A			D			C	

Intersection Summary

HCM Average Control Delay	81.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑		↑↑	↑↑↑		↑↑	↑↑	↑↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.86		0.97	0.91		0.97	0.95	0.88
Frt		1.00	0.85		0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		4550	1417		5644		3072	4504		3072	3167	2493
Flt Permitted		1.00	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		4550	1417		5644		3072	4504		3072	3167	2493
Volume (vph)	0	2901	498	0	2532	295	10	865	63	386	505	266
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	2991	513	0	2610	304	10	892	65	398	521	274
RTOR Reduction (vph)	0	0	61	0	22	0	0	1	0	0	0	181
Lane Group Flow (vph)	0	2991	452	0	2892	0	10	956	0	398	521	93
Turn Type		pm+ov					Prot			Prot		Perm
Protected Phases		6	3		2		3	8		7	4	
Permitted Phases			6									4
Actuated Green, G (s)		38.5	46.0		38.5		7.5	27.7		9.0	29.2	29.2
Effective Green, g (s)		40.0	47.5		40.0		7.5	29.0		9.0	30.5	30.5
Actuated g/C Ratio		0.44	0.53		0.44		0.08	0.32		0.10	0.34	0.34
Clearance Time (s)		5.5	4.0		5.5		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)		4.9	3.0		5.2		3.0	5.1		3.0	5.1	5.1
Lane Grp Cap (vph)		2022	811		2508		256	1451		307	1073	845
v/s Ratio Prot		c0.66	0.05		0.51		0.00	c0.21		c0.13	0.16	
v/s Ratio Perm			0.27									0.04
v/c Ratio		1.48	0.56		1.15		0.04	0.66		1.30	0.49	0.11
Uniform Delay, d1		25.0	14.2		25.0		37.9	26.2		40.5	23.5	20.4
Progression Factor		1.00	1.00		0.97		1.00	1.00		1.26	1.03	2.81
Incremental Delay, d2		218.4	0.8		69.3		0.1	2.4		146.4	0.4	0.1
Delay (s)		243.4	15.1		93.5		38.0	28.6		197.4	24.7	57.4
Level of Service		F	B		F		D	C		F	C	E
Approach Delay (s)		209.9			93.5		28.7			89.8		
Approach LOS		F			F		C			F		

Intersection Summary

HCM Average Control Delay	133.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑↑	↗	↖↗	↑↑↑	↖↗	↗
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.86	1.00	0.97	0.91	0.94	0.88
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1118	4047	1000	2168	3212	3152	1760
Flt Permitted	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1118	4047	1000	2168	3212	3152	1760
Volume (vph)	16	1884	456	284	1757	789	597
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	16	1903	461	287	1775	797	603
RTOR Reduction (vph)	0	0	275	0	0	0	480
Lane Group Flow (vph)	16	1903	186	287	1775	797	123
Conf. Peds. (#/hr)			86	86		1	242
Conf. Bikes (#/hr)			19				3
Turn Type	Prot		Over	Prot			Over
Protected Phases	1	6	8	5	2	8	5
Permitted Phases							
Actuated Green, G (s)	2.6	47.8	30.1	24.5	68.7	30.1	24.5
Effective Green, g (s)	3.6	50.5	33.0	24.5	71.4	33.0	24.5
Actuated g/C Ratio	0.03	0.42	0.28	0.20	0.60	0.28	0.20
Clearance Time (s)	5.0	6.7	6.9	4.0	6.7	6.9	4.0
Vehicle Extension (s)	3.0	5.0	3.0	3.0	5.0	3.0	3.0
Lane Grp Cap (vph)	34	1703	275	443	1911	867	359
v/s Ratio Prot	0.01	c0.47	0.19	0.13	c0.55	c0.25	0.07
v/s Ratio Perm							
v/c Ratio	0.47	1.12	0.68	0.65	0.93	0.92	0.34
Uniform Delay, d1	57.3	34.8	38.8	43.8	22.0	42.2	40.9
Progression Factor	0.87	1.53	1.98	0.87	0.70	1.00	1.00
Incremental Delay, d2	0.9	53.7	0.6	2.5	7.6	14.5	0.6
Delay (s)	50.9	107.1	77.5	40.7	23.0	56.7	41.4
Level of Service	D	F	E	D	C	E	D
Approach Delay (s)		101.0			25.5	50.1	
Approach LOS		F			C	D	
Intersection Summary							
HCM Average Control Delay			62.1		HCM Level of Service		E
HCM Volume to Capacity ratio			1.00				
Actuated Cycle Length (s)			120.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization			91.7%		ICU Level of Service		F
Analysis Period (min)			15				
c Critical Lane Group							



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↘↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	0.97	0.91	0.91
Frbp, ped/bikes	1.00	1.00	0.89	1.00	1.00	0.85	1.00	1.00	0.87	1.00	0.91	0.91
Flpb, ped/bikes	0.99	1.00	1.00	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94	0.94
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1569	3167	1260	1525	3167	1209	3072	4550	1231	3072	3911	3911
Flt Permitted	0.26	1.00	1.00	0.34	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	432	3167	1260	538	3167	1209	3072	4550	1231	3072	3911	3911
Volume (vph)	68	730	536	301	636	387	265	623	154	220	757	448
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	74	793	583	327	691	421	288	677	167	239	823	487
RTOR Reduction (vph)	0	0	1	0	0	161	0	0	51	0	113	0
Lane Group Flow (vph)	74	793	582	327	691	260	288	677	116	239	1197	0
Confl. Peds. (#/hr)	140		119	119		140	181		101	101		181
Confl. Bikes (#/hr)			4			5			4			3
Turn Type	pm+pt		pm+ov	Perm		Perm	Prot		Perm	Prot		
Protected Phases	1	6	3		2		3	8		7	4	
Permitted Phases	6		6	2		2			8			
Actuated Green, G (s)	43.4	43.4	49.4	35.5	35.5	35.5	6.0	19.9	19.9	12.7	26.6	
Effective Green, g (s)	44.9	44.9	50.9	37.0	37.0	37.0	6.0	20.4	20.4	12.7	27.1	
Actuated g/C Ratio	0.50	0.50	0.57	0.41	0.41	0.41	0.07	0.23	0.23	0.14	0.30	
Clearance Time (s)	3.5	5.5	4.0	5.5	5.5	5.5	4.0	4.5	4.5	4.0	4.5	
Vehicle Extension (s)	3.0	4.0	2.0	4.0	4.0	4.0	2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	265	1580	769	221	1302	497	205	1031	279	433	1178	
v/s Ratio Prot	0.01	0.25	c0.05		0.22		c0.09	0.15		0.08	c0.31	
v/s Ratio Perm	0.13		0.41	c0.61		0.22			0.09			
v/c Ratio	0.28	0.50	0.76	1.48	0.53	0.52	1.40	0.66	0.42	0.55	1.10dr	
Uniform Delay, d1	13.0	15.1	14.8	26.5	20.0	19.9	42.0	31.6	29.7	36.0	31.4	
Progression Factor	0.93	0.94	1.08	1.07	1.09	1.26	1.05	1.14	1.18	1.00	1.00	
Incremental Delay, d2	0.6	0.3	3.7	238.4	0.5	1.3	208.5	3.2	4.5	0.9	30.4	
Delay (s)	12.7	14.5	19.8	266.8	22.3	26.3	252.6	39.3	39.5	36.9	61.9	
Level of Service	B	B	B	F	C	C	F	D	D	D	E	
Approach Delay (s)		16.5			79.0			93.6			58.0	
Approach LOS		B			E			F			E	

Intersection Summary

HCM Average Control Delay	59.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↘	↑↑↑	↗	↘	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)					4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor					1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frt					1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected					0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)					1583	1417	1583	4550	1417	1583	4550	
Flt Permitted					0.76	1.00	0.09	1.00	1.00	0.37	1.00	
Satd. Flow (perm)					1262	1417	157	4550	1417	609	4550	
Volume (vph)	0	0	0	125	0	175	1	662	95	124	1692	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	136	0	190	1	720	103	135	1839	0
RTOR Reduction (vph)	0	0	0	0	0	155	0	0	28	0	0	0
Lane Group Flow (vph)	0	0	0	0	136	35	1	720	75	135	1839	0
Turn Type	Perm			Perm			Perm	Perm	Perm		Perm	
Protected Phases	4			4			4		2		2	
Permitted Phases	4			4			2		2		2	
Actuated Green, G (s)					15.5	15.5	64.5	64.5	64.5	64.5	64.5	64.5
Effective Green, g (s)					16.5	16.5	65.5	65.5	65.5	65.5	65.5	65.5
Actuated g/C Ratio					0.18	0.18	0.73	0.73	0.73	0.73	0.73	0.73
Clearance Time (s)					5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)					3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)					231	260	114	3311	1031	443	3311	
v/s Ratio Prot					0.16				c0.40			
v/s Ratio Perm					c0.11	0.02	0.01	0.05		0.22		
v/c Ratio					0.59	0.13	0.01	0.22	0.07	0.30	0.56	
Uniform Delay, d1					33.6	30.8	3.4	4.0	3.5	4.3	5.6	
Progression Factor					1.00	1.00	2.08	1.64	3.86	0.97	1.03	
Incremental Delay, d2					3.8	0.2	0.1	0.1	0.1	0.8	0.3	
Delay (s)					37.4	31.0	7.1	6.6	13.7	4.9	6.1	
Level of Service					D	C	A	A	B	A	A	
Approach Delay (s)	0.0			33.7			7.5			6.0		
Approach LOS	A			C			A			A		

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕	↗	↖	↕↕↕		↖↖	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95	0.95	1.00	0.91		0.97	0.91	
Frt		0.96			0.96	0.85	1.00	0.97		1.00	1.00	
Flt Protected		0.97			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2961			1501	1346	1583	4394		3072	4541	
Flt Permitted		0.80			0.90	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2424			1366	1346	1583	4394		3072	4541	
Volume (vph)	84	31	42	10	16	69	11	616	182	132	1640	22
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	86	32	43	10	16	70	11	629	186	135	1673	22
RTOR Reduction (vph)	0	36	0	0	8	35	0	31	0	0	1	0
Lane Group Flow (vph)	0	125	0	0	27	26	11	784	0	135	1694	0
Turn Type		Perm		Perm		pm+ov	Prot			Prot		
Protected Phases		8		4	4	5	1	6		5	2	
Permitted Phases		8		4		4						
Actuated Green, G (s)		12.6			12.6	20.7	1.4	55.1		8.1	61.8	
Effective Green, g (s)		14.1			14.1	22.2	1.4	55.8		8.1	62.5	
Actuated g/C Ratio		0.16			0.16	0.25	0.02	0.62		0.09	0.69	
Clearance Time (s)		5.5			5.5	4.0	4.0	4.7		4.0	4.7	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		380			214	392	25	2724		276	3153	
v/s Ratio Prot						0.01	0.01	0.18		c0.04	c0.37	
v/s Ratio Perm		c0.05			0.02	0.01						
v/c Ratio		0.33			0.13	0.07	0.44	0.29		0.49	0.54	
Uniform Delay, d1		33.7			32.7	26.0	43.9	7.9		39.0	6.7	
Progression Factor		1.00			1.00	1.00	0.71	1.97		0.97	0.91	
Incremental Delay, d2		0.5			0.3	0.1	11.5	0.3		1.1	0.6	
Delay (s)		34.2			32.9	26.0	42.8	15.8		38.8	6.6	
Level of Service		C			C	C	D	B		D	A	
Approach Delay (s)		34.2			28.6			16.2			9.0	
Approach LOS		C			C			B			A	

Intersection Summary

HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔		↔	↔		↔	↔↔	↑↑↑		↔	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97		1.00	1.00		1.00	0.97	0.91		1.00	0.91	
Frt	1.00		0.85	1.00		0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95		1.00	0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3072		1417	1583		1417	3072	4520		1583	4544	
Flt Permitted	0.95		1.00	0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3072		1417	1583		1417	3072	4520		1583	4544	
Volume (vph)	128	0	179	16	0	77	19	634	29	82	1529	15
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	141	0	197	18	0	85	21	697	32	90	1680	16
RTOR Reduction (vph)	0	0	154	0	0	64	0	4	0	0	1	0
Lane Group Flow (vph)	141	0	43	18	0	21	21	725	0	90	1695	0
Turn Type	Prot		custom	Prot		custom	Prot			Prot		
Protected Phases	3		3 5	4		1 4	5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	13.2		19.4	9.9		22.9	6.2	40.9		8.1	42.8	
Effective Green, g (s)	14.1		19.5	10.8		22.1	5.4	41.8		7.3	43.7	
Actuated g/C Ratio	0.16		0.22	0.12		0.25	0.06	0.46		0.08	0.49	
Clearance Time (s)	4.9			4.9			3.2	4.9		3.2	4.9	
Vehicle Extension (s)	3.0			3.0			3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	481		307	190		348	184	2099		128	2206	
v/s Ratio Prot	c0.05		0.03	c0.01		0.01	0.01	0.16		c0.06	c0.37	
v/s Ratio Perm												
v/c Ratio	0.29		0.14	0.09		0.06	0.11	0.35		0.70	0.77	
Uniform Delay, d1	33.5		28.5	35.2		26.0	40.0	15.4		40.3	19.0	
Progression Factor	1.00		1.00	1.00		1.00	1.37	0.42		0.83	1.15	
Incremental Delay, d2	0.3		0.2	0.2		0.1	0.0	0.0		14.4	2.3	
Delay (s)	33.9		28.7	35.5		26.1	54.8	6.5		47.8	24.3	
Level of Service	C		C	D		C	D	A		D	C	
Approach Delay (s)		30.9			27.7			7.9			25.4	
Approach LOS		C			C			A			C	
Intersection Summary												
HCM Average Control Delay			21.7									HCM Level of Service C
HCM Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			90.0									Sum of lost time (s) 12.0
Intersection Capacity Utilization			59.1%									ICU Level of Service B
Analysis Period (min)			15									
c Critical Lane Group												

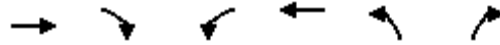


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↗	↑↑↑	↑↑↑↗		↖↗	↘↙
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.91	0.91		0.97	0.88
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3072	4550	4478		3072	2493
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3072	4550	4478		3072	2493
Volume (vph)	460	1841	1725	203	537	1137
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	500	2001	1875	221	584	1236
RTOR Reduction (vph)	0	0	16	0	0	340
Lane Group Flow (vph)	500	2001	2080	0	584	896
Turn Type	Prot					Prot
Protected Phases	5	2 5	6		4	4
Permitted Phases						
Actuated Green, G (s)	12.0	49.5	32.5		30.0	30.0
Effective Green, g (s)	13.0	51.0	34.0		31.0	31.0
Actuated g/C Ratio	0.14	0.57	0.38		0.34	0.34
Clearance Time (s)	5.0		5.5		5.0	5.0
Vehicle Extension (s)	2.0		3.0		3.0	3.0
Lane Grp Cap (vph)	444	2578	1692		1058	859
v/s Ratio Prot	c0.16	0.44	c0.46		0.19	c0.36
v/s Ratio Perm						
v/c Ratio	1.13	0.78	1.23		0.55	1.04
Uniform Delay, d1	38.5	15.1	28.0		23.9	29.5
Progression Factor	1.00	1.00	1.00		1.25	1.47
Incremental Delay, d2	81.9	2.4	108.6		0.4	37.4
Delay (s)	120.4	17.5	136.6		30.2	80.8
Level of Service	F	B	F		C	F
Approach Delay (s)		38.0	136.6		64.5	
Approach LOS		D	F		E	

Intersection Summary


















HCM Average Control Delay	77.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
73: Santa Monica Blvd & Century Park West



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↓	↑↑↑	↑↓	↑
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	0.97	0.91
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3212	1000	2168	3212	2168	910
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3212	1000	2168	3212	2168	910
Volume (vph)	2217	343	131	2441	758	278
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	2286	354	135	2516	781	287
RTOR Reduction (vph)	0	140	0	0	0	205
Lane Group Flow (vph)	2286	215	135	2516	781	82
Confl. Peds. (#/hr)		145	145		56	
Confl. Bikes (#/hr)		19				
Turn Type		Over	Prot			Perm
Protected Phases	6	4	5	2	4	
Permitted Phases						4
Actuated Green, G (s)	66.2	28.1	10.6	80.8	28.1	28.1
Effective Green, g (s)	67.4	30.0	10.6	82.0	30.0	30.0
Actuated g/C Ratio	0.56	0.25	0.09	0.68	0.25	0.25
Clearance Time (s)	5.2	5.9	4.0	5.2	5.9	5.9
Vehicle Extension (s)	3.7	3.8	1.0	3.5	3.8	3.8
Lane Grp Cap (vph)	1804	250	192	2195	542	228
v/s Ratio Prot	c0.71	0.21	0.06	c0.78	c0.36	
v/s Ratio Perm						0.09
v/c Ratio	1.27	0.86	0.70	1.15	1.44	0.36
Uniform Delay, d1	26.3	43.0	53.2	19.0	45.0	37.1
Progression Factor	1.67	0.97	0.96	0.86	1.00	1.00
Incremental Delay, d2	120.7	3.7	4.3	68.6	208.7	4.4
Delay (s)	164.6	45.5	55.5	85.0	253.7	41.5
Level of Service	F	D	E	F	F	D
Approach Delay (s)	148.7			83.5	196.7	
Approach LOS	F			F	F	

Intersection Summary			
HCM Average Control Delay	129.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	122.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 	 	 			  
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.88	0.95	1.00	1.00	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3072	2493	3167	1417	1583	4550
Flt Permitted	0.95	1.00	1.00	1.00	0.42	1.00
Satd. Flow (perm)	3072	2493	3167	1417	705	4550
Volume (vph)	614	448	379	321	239	322
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	675	492	416	353	263	354
RTOR Reduction (vph)	0	297	0	19	0	0
Lane Group Flow (vph)	675	195	416	334	263	354
Turn Type		Perm		pm+ov	pm+pt	
Protected Phases	4		2	4	1	6
Permitted Phases		4		2	6	
Actuated Green, G (s)	35.1	35.1	36.9	72.0	44.9	44.9
Effective Green, g (s)	35.6	35.6	38.4	74.0	46.4	46.4
Actuated g/C Ratio	0.40	0.40	0.43	0.82	0.52	0.52
Clearance Time (s)	4.5	4.5	5.5	4.5	3.0	5.5
Vehicle Extension (s)	3.0	3.0	5.0	3.0	3.0	5.0
Lane Grp Cap (vph)	1215	986	1351	1228	402	2346
v/s Ratio Prot	c0.22		0.13	0.11	c0.03	0.08
v/s Ratio Perm		0.08		0.13	c0.31	
v/c Ratio	0.56	0.20	0.31	0.27	0.65	0.15
Uniform Delay, d1	21.1	17.8	17.0	1.8	16.6	11.5
Progression Factor	1.08	3.72	1.25	0.82	1.00	1.00
Incremental Delay, d2	0.3	0.0	0.6	0.1	3.8	0.1
Delay (s)	23.0	66.4	21.8	1.6	20.4	11.6
Level of Service	C	E	C	A	C	B
Approach Delay (s)	41.3		12.5			15.3
Approach LOS	D		B			B
Intersection Summary						
HCM Average Control Delay			26.4		HCM Level of Service	C
HCM Volume to Capacity ratio			0.60			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			56.1%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
75: Olympic Blvd & Century Park West



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↗	↑↑↑	↑↑↑	↖	↖↗	↖↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.91	1.00	0.97	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3072	4550	4550	1417	3072	2493
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3072	4550	4550	1417	3072	2493
Volume (vph)	168	2287	2440	84	13	845
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	171	2334	2490	86	13	862
RTOR Reduction (vph)	0	0	0	41	0	0
Lane Group Flow (vph)	171	2334	2490	45	13	862
Turn Type	Prot			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)	8.7	52.8	40.1	40.1	27.3	27.3
Effective Green, g (s)	8.7	54.0	41.3	41.3	28.0	28.0
Actuated g/C Ratio	0.10	0.60	0.46	0.46	0.31	0.31
Clearance Time (s)	4.0	5.2	5.2	5.2	4.7	4.7
Vehicle Extension (s)	3.0	4.8	4.6	4.6	3.0	3.0
Lane Grp Cap (vph)	297	2730	2088	650	956	776
v/s Ratio Prot	0.06	c0.51	c0.55		0.00	
v/s Ratio Perm				0.03		c0.35
v/c Ratio	0.58	0.85	1.19	0.07	0.01	1.11
Uniform Delay, d1	38.9	14.8	24.4	13.6	21.4	31.0
Progression Factor	0.58	2.45	1.00	1.00	0.92	0.83
Incremental Delay, d2	0.2	0.3	91.7	0.2	0.0	66.1
Delay (s)	23.0	36.6	116.0	13.8	19.8	91.8
Level of Service	C	D	F	B	B	F
Approach Delay (s)		35.6	112.6		90.8	
Approach LOS		D	F		F	

Intersection Summary

HCM Average Control Delay	77.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑↑		↘	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4550	1417	1583	4521		1583	3150		1583	3126	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.13	1.00		0.15	1.00	
Satd. Flow (perm)	1583	4550	1417	1583	4521		215	3150		247	3126	
Volume (vph)	156	2560	340	101	2329	104	185	1013	38	126	948	89
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	161	2639	351	104	2401	107	191	1044	39	130	977	92
RTOR Reduction (vph)	0	0	114	0	4	0	0	2	0	0	6	0
Lane Group Flow (vph)	161	2639	237	104	2504	0	191	1081	0	130	1063	0
Turn Type	Prot		Perm	Prot		pm+pt				Perm		
Protected Phases	1	6		5	2		3	8				4
Permitted Phases			6				8			4		
Actuated Green, G (s)	14.2	54.4	54.4	11.6	51.8		40.0	40.0		26.0	26.0	
Effective Green, g (s)	14.2	55.4	55.4	11.6	52.8		41.0	41.0		27.0	27.0	
Actuated g/C Ratio	0.12	0.46	0.46	0.10	0.44		0.34	0.34		0.22	0.22	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		3.5	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	187	2101	654	153	1989		187	1076		56	703	
v/s Ratio Prot	c0.10	c0.58		0.07	0.55		0.08	c0.34			0.34	
v/s Ratio Perm			0.17				0.26			c0.53		
v/c Ratio	0.86	1.26	0.36	0.68	1.26		1.02	1.00		2.32	1.51	
Uniform Delay, d1	51.9	32.3	20.9	52.4	33.6		57.2	39.5		46.5	46.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.60	1.49		1.00	1.00	
Incremental Delay, d2	30.1	119.3	1.6	9.1	120.8		25.3	9.4		646.6	237.6	
Delay (s)	82.0	151.6	22.4	61.5	154.4		116.7	68.1		693.1	284.1	
Level of Service	F	F	C	E	F		F	E		F	F	
Approach Delay (s)		133.7			150.7			75.4			328.5	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	158.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.50		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	119.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑	↖	↖↗	↑↑	↖
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3212	1000	2168	3212	1000	2168	2235	1000	2168	2235	1000
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2168	3212	1000	2168	3212	1000	2168	2235	1000	2168	2235	1000
Volume (vph)	105	2070	118	86	2698	389	5	1064	73	374	1311	94
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	108	2134	122	89	2781	401	5	1097	75	386	1352	97
RTOR Reduction (vph)	0	0	53	0	0	12	0	0	43	0	0	35
Lane Group Flow (vph)	108	2134	69	89	2781	389	5	1097	32	386	1352	62
Turn Type	Prot		Perm	Prot		pm+ov	Prot		Perm	Prot		Perm
Protected Phases	1	6		5	2	7	3	8		7	4	
Permitted Phases			6			2			8			4
Actuated Green, G (s)	5.0	26.3	26.3	9.0	30.3	52.5	1.1	42.6	42.6	22.2	63.7	63.7
Effective Green, g (s)	5.0	27.8	27.8	9.0	31.8	54.0	1.1	45.0	45.0	22.2	66.1	66.1
Actuated g/C Ratio	0.04	0.23	0.23	0.08	0.27	0.45	0.01	0.38	0.38	0.18	0.55	0.55
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5	4.0	4.0	6.4	6.4	4.0	6.4	6.4
Vehicle Extension (s)	2.0	4.5	4.5	2.0	5.2	2.0	2.0	4.7	4.7	2.0	4.7	4.7
Lane Grp Cap (vph)	90	744	232	163	851	450	20	838	375	401	1231	551
v/s Ratio Prot	0.05	c0.66		0.04	c0.87	0.16	0.00	c0.49		0.18	c0.60	
v/s Ratio Perm			0.07			0.23			0.03			0.06
v/c Ratio	1.20	2.87	0.30	0.55	3.27	0.86	0.25	1.31	0.09	0.96	1.10	0.11
Uniform Delay, d1	57.5	46.1	38.0	53.5	44.1	29.7	59.0	37.5	24.2	48.5	27.0	12.9
Progression Factor	1.04	0.41	0.15	0.95	0.93	0.89	1.00	1.00	1.00	0.65	0.70	0.19
Incremental Delay, d2	99.7	841.1	0.3	0.2	1020.8	1.7	2.4	147.7	0.2	18.6	49.6	0.1
Delay (s)	159.8	860.1	6.0	50.9	1061.9	28.0	61.4	185.2	24.4	50.1	68.5	2.5
Level of Service	F	F	A	D	F	C	E	F	C	D	E	A
Approach Delay (s)		784.0			907.6			174.4			61.1	
Approach LOS		F			F			F			E	

Intersection Summary

HCM Average Control Delay	594.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	156.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.86		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	5715		1583	3167	1417	1583	3167	1417
Flt Permitted	0.11	1.00	1.00	0.11	1.00		0.15	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	183	4550	1417	188	5715		252	3167	1417	219	3167	1417
Volume (vph)	311	2281	136	166	3175	70	37	780	53	222	1075	284
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	321	2352	140	171	3273	72	38	804	55	229	1108	293
RTOR Reduction (vph)	0	0	27	0	3	0	0	0	4	0	0	0
Lane Group Flow (vph)	321	2352	113	171	3342	0	38	804	51	229	1108	293
Turn Type	pm+pt		Perm	pm+pt		Perm		pm+ov	pm+pt		pm+ov	
Protected Phases	1	6		5	2			8	5	7	4	1
Permitted Phases	6		6	2		8	8	8	4			4
Actuated Green, G (s)	43.0	36.0	36.0	41.0	35.0	25.0	25.0	31.0	34.0	34.0	41.0	
Effective Green, g (s)	43.5	36.5	36.5	41.5	35.5	26.5	26.5	32.5	35.5	35.5	42.5	
Actuated g/C Ratio	0.48	0.41	0.41	0.46	0.39	0.29	0.29	0.36	0.39	0.39	0.47	
Clearance Time (s)	4.0	4.5	4.5	4.0	4.5	5.5	5.5	4.0	4.0	5.5	4.0	
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	5.0	3.0	3.0	5.0	3.0	
Lane Grp Cap (vph)	197	1845	575	180	2254	74	933	575	162	1249	732	
v/s Ratio Prot	c0.13	0.52		0.06	0.58		0.25	0.01	c0.08	0.35	0.03	
v/s Ratio Perm	c0.66		0.08	0.38		0.15		0.03	c0.48		0.18	
v/c Ratio	1.63	1.27	0.20	0.95	1.48	0.51	0.86	0.09	1.41	0.89	0.40	
Uniform Delay, d1	43.7	26.8	17.3	43.9	27.2	26.4	30.0	19.0	24.6	25.4	15.5	
Progression Factor	2.29	0.69	0.78	1.43	1.38	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	285.4	124.1	0.1	10.5	217.4	11.5	9.0	0.1	218.5	8.5	0.4	
Delay (s)	385.5	142.7	13.6	73.5	255.1	37.9	39.0	19.0	243.0	33.9	15.8	
Level of Service	F	F	B	E	F	D	D	B	F	C	B	
Approach Delay (s)		163.9			246.2		37.7			60.0		
Approach LOS		F			F		D			E		

Intersection Summary

HCM Average Control Delay	164.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	126.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1583	3068		1583	3156		1504	1583	1417		1615	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1583	3068		1583	3156		1504	1583	1417		1615	
Volume (vph)	10	1149	300	178	949	21	349	619	767	27	299	84
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	1197	312	185	989	22	364	645	799	28	311	88
RTOR Reduction (vph)	0	19	0	0	1	0	0	0	236	0	0	0
Lane Group Flow (vph)	10	1490	0	185	1010	0	364	645	563	0	427	0
Turn Type	Prot		Prot		Split		pm+ov		Split			
Protected Phases	1	6		5	2		3	3	5		4	4
Permitted Phases									3			
Actuated Green, G (s)	1.5	54.9		17.4	70.8		10.0	10.0	27.4		20.0	
Effective Green, g (s)	0.5	55.7		16.4	71.6		10.9	10.9	27.3		21.0	
Actuated g/C Ratio	0.00	0.46		0.14	0.60		0.09	0.09	0.23		0.18	
Clearance Time (s)	3.0	4.8		3.0	4.8		4.9	4.9	3.0		5.0	
Vehicle Extension (s)	3.0	6.0		3.0	6.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	7	1424		216	1883		137	144	370		283	
v/s Ratio Prot	0.01	c0.49		0.12	0.32		0.24	c0.41	c0.21		c0.26	
v/s Ratio Perm									0.19			
v/c Ratio	1.43	1.05		0.86	0.54		2.66	4.48	1.52		1.51	
Uniform Delay, d1	59.8	32.1		50.6	14.4		54.5	54.5	46.4		49.5	
Progression Factor	1.10	1.11		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	251.9	23.1		26.7	1.1		766.1	1581.6	248.6		246.5	
Delay (s)	317.9	58.8		77.4	15.5		820.7	1636.1	295.0		296.0	
Level of Service	F	E		E	B		F	F	F		F	
Approach Delay (s)		60.5			25.0			879.3			296.0	
Approach LOS		E			C			F			F	

Intersection Summary

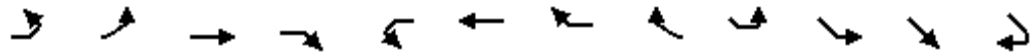
HCM Average Control Delay	371.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	134.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖		↖	↖		↖	↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.89		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1504	1511	1417	1583	1485		1583	1653		1583	1667	1417
Flt Permitted	0.71	0.68	1.00	0.95	1.00		0.34	1.00		0.22	1.00	1.00
Satd. Flow (perm)	1119	1073	1417	1583	1485		561	1653		362	1667	1417
Volume (vph)	510	10	172	20	20	54	64	706	39	33	567	344
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	531	10	179	21	21	56	67	735	41	34	591	358
RTOR Reduction (vph)	0	0	153	0	51	0	0	2	0	0	0	143
Lane Group Flow (vph)	266	275	26	21	26	0	67	774	0	34	591	215
Turn Type	Perm		Perm	Split			Perm			Perm		Perm
Protected Phases		4		3	3			2			2	
Permitted Phases	4		4				2			2		2
Actuated Green, G (s)	10.0	10.0	10.0	6.0	6.0		43.6	43.6		43.6	43.6	43.6
Effective Green, g (s)	11.0	11.0	11.0	7.0	7.0		45.0	45.0		45.0	45.0	45.0
Actuated g/C Ratio	0.15	0.15	0.15	0.09	0.09		0.60	0.60		0.60	0.60	0.60
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.4	5.4		5.4	5.4	5.4
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	164	157	208	148	139		337	992		217	1000	850
v/s Ratio Prot				0.01	c0.02			c0.47			0.35	
v/s Ratio Perm	0.24	c0.26	0.02				0.12			0.09		0.15
v/c Ratio	1.62	1.75	0.13	0.14	0.19		0.20	0.78		0.16	0.59	0.25
Uniform Delay, d1	32.0	32.0	27.8	31.2	31.4		6.8	11.3		6.6	9.3	7.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	306.1	363.1	0.3	0.4	0.7		1.3	6.1		1.5	2.6	0.7
Delay (s)	338.1	395.1	28.1	31.7	32.0		8.1	17.4		8.2	11.9	7.8
Level of Service	F	F	C	C	C		A	B		A	B	A
Approach Delay (s)		282.8			32.0			16.6			10.2	
Approach LOS		F			C			B			B	

Intersection Summary

HCM Average Control Delay	87.3	HCM Level of Service	F
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	SEL2	SEL	SET	SER
Lane Configurations			↕	↗		↕↗				↘	↕↗	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)			4.0	4.0		4.0				4.0	4.0	
Lane Util. Factor			1.00	1.00		0.95				1.00	0.95	
Frt			1.00	0.85		0.98				1.00	0.99	
Flt Protected			0.99	1.00		0.98				0.95	1.00	
Satd. Flow (prot)			1161	1000		2160				1118	2209	
Flt Permitted			0.36	1.00		0.55				0.51	1.00	
Satd. Flow (perm)			427	1000		1202				599	2209	
Volume (vph)	11	202	576	48	345	521	53	55	11	5	561	48
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	11	210	600	50	359	543	55	57	11	5	584	50
RTOR Reduction (vph)	0	0	0	26	0	6	0	0	0	0	8	0
Lane Group Flow (vph)	0	0	821	24	0	1008	0	0	0	16	626	0
Turn Type		Perm		Perm	Perm				Perm	Perm		
Protected Phases			6			2					4	
Permitted Phases		6		6	2				4	4		
Actuated Green, G (s)			34.0	34.0		34.0				30.0	30.0	
Effective Green, g (s)			36.0	36.0		36.0				31.0	31.0	
Actuated g/C Ratio			0.48	0.48		0.48				0.41	0.41	
Clearance Time (s)			6.0	6.0		6.0				5.0	5.0	
Vehicle Extension (s)			3.0	3.0		3.0				3.0	3.0	
Lane Grp Cap (vph)			205	480		577				248	913	
v/s Ratio Prot											0.28	
v/s Ratio Perm			c1.92	0.02		0.84				0.03		
v/c Ratio			4.00	0.05		5.20dl				0.06	0.69	
Uniform Delay, d1			19.5	10.4		19.5				13.3	18.0	
Progression Factor			1.05	1.11		1.00				1.00	1.00	
Incremental Delay, d2			1353.2	0.0		343.5				0.5	4.2	
Delay (s)			1373.6	11.5		363.0				13.8	22.2	
Level of Service			F	B		F				B	C	
Approach Delay (s)			1295.4			363.0					22.0	
Approach LOS			F			F					C	

Intersection Summary

HCM Average Control Delay	441.7	HCM Level of Service	F
HCM Volume to Capacity ratio	2.76		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	186.3%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	NWL	NWT	NWR	NWR2
Lane Configurations				
Ideal Flow (vphpl)	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	
Satd. Flow (prot)	1118	1176	1000	
Flt Permitted	0.33	1.00	1.00	
Satd. Flow (perm)	390	1176	1000	
Volume (vph)	204	270	108	441
Peak-hour factor, PHF	0.96	0.96	0.96	0.96
Adj. Flow (vph)	212	281	112	459
RTOR Reduction (vph)	0	0	125	0
Lane Group Flow (vph)	212	281	446	0
Turn Type	Perm		Perm	
Protected Phases		8		
Permitted Phases	8		8	
Actuated Green, G (s)	30.0	30.0	30.0	
Effective Green, g (s)	31.0	31.0	31.0	
Actuated g/C Ratio	0.41	0.41	0.41	
Clearance Time (s)	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	
Lane Grp Cap (vph)	161	486	413	
v/s Ratio Prot		0.24		
v/s Ratio Perm	0.54		0.45	
v/c Ratio	1.32	0.58	1.08	
Uniform Delay, d1	22.0	17.0	22.0	
Progression Factor	1.11	1.03	1.16	
Incremental Delay, d2	146.6	0.5	40.7	
Delay (s)	170.9	17.9	66.2	
Level of Service	F	B	E	
Approach Delay (s)		74.3		
Approach LOS		E		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		1.00	0.86			1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98			0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	1.00	1.00
Satd. Flow (prot)	2168	4026		1118	3958			1125		1118	1176	1000
Flt Permitted	0.95	1.00		0.06	1.00			0.25		0.35	1.00	1.00
Satd. Flow (perm)	2168	4026		66	3958			282		412	1176	1000
Volume (vph)	205	2370	85	132	2406	412	309	393	178	272	455	307
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	216	2495	89	139	2533	434	325	414	187	286	479	323
RTOR Reduction (vph)	0	3	0	0	20	0	0	3	0	0	0	0
Lane Group Flow (vph)	216	2581	0	139	2947	0	0	923	0	286	479	323
Turn Type	Prot		Perm			Perm			Perm		pm+ov	
Protected Phases	5	2			6			4			4	5
Permitted Phases				6			4			4		4
Actuated Green, G (s)	17.1	92.0		70.9	70.9			49.0		49.0	49.0	66.1
Effective Green, g (s)	17.1	92.0		70.9	70.9			50.0		50.0	50.0	67.1
Actuated g/C Ratio	0.11	0.61		0.47	0.47			0.33		0.33	0.33	0.45
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0		5.0	5.0	4.0
Vehicle Extension (s)	1.5	4.0		4.0	4.0			3.0		3.0	3.0	1.5
Lane Grp Cap (vph)	247	2469		31	1871			94		137	392	474
v/s Ratio Prot	0.10	c0.64			0.74						0.41	0.08
v/s Ratio Perm				c2.09				c3.27		0.69		0.25
v/c Ratio	0.87	1.05		4.48	1.58			9.82		2.09	1.22	0.68
Uniform Delay, d1	65.4	29.0		39.5	39.5			50.0		50.0	50.0	33.0
Progression Factor	1.31	0.72		1.00	1.00			1.00		0.94	0.94	1.04
Incremental Delay, d2	3.3	21.8		1639.2	261.4			3991.4		497.5	107.5	1.1
Delay (s)	88.8	42.6		1678.8	300.9			4041.4		544.6	154.5	35.3
Level of Service	F	D		F	F			F		F	F	D
Approach Delay (s)		46.2			362.6			4041.4			221.7	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	661.5	HCM Level of Service	F
HCM Volume to Capacity ratio	5.99		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	203.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕	↗	↖	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.96		1.00	0.98		1.00	1.00	0.55	1.00	1.00	0.79
Flpb, ped/bikes	0.94	1.00		0.98	1.00		0.92	1.00	1.00	0.66	1.00	1.00
Frt	1.00	0.97		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1489	1556		1551	1606		1463	3167	776	1051	3167	1122
Flt Permitted	0.55	1.00		0.31	1.00		0.35	1.00	1.00	0.54	1.00	1.00
Satd. Flow (perm)	860	1556		498	1606		538	3167	776	596	3167	1122
Volume (vph)	48	317	79	167	293	48	140	310	155	26	553	192
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	50	330	82	174	305	50	146	323	161	27	576	200
RTOR Reduction (vph)	0	12	0	0	7	0	0	0	40	0	0	125
Lane Group Flow (vph)	50	400	0	174	348	0	146	323	121	27	576	75
Conf. Peds. (#/hr)	117		216	216		117	196		419	419		196
Conf. Bikes (#/hr)			5			6			8			20
Turn Type	Perm			pm+pt			Perm		pm+ov	Perm		Perm
Protected Phases		6		5	2			8	5		4	
Permitted Phases	6			2			8	8	4		4	4
Actuated Green, G (s)	27.6	27.6		37.6	37.6		27.0	27.0	33.5	27.0	27.0	27.0
Effective Green, g (s)	29.0	29.0		39.0	39.0		28.0	28.0	34.0	28.0	28.0	28.0
Actuated g/C Ratio	0.39	0.39		0.52	0.52		0.37	0.37	0.45	0.37	0.37	0.37
Clearance Time (s)	5.4	5.4		3.5	5.4		5.0	5.0	3.5	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	333	602		343	835		201	1182	393	223	1182	419
v/s Ratio Prot		c0.26		c0.04	0.22			0.10	0.02		0.18	
v/s Ratio Perm	0.06			0.22			c0.27		0.13	0.05		0.07
v/c Ratio	0.15	0.67		0.51	0.42		0.73	0.27	0.31	0.12	0.49	0.18
Uniform Delay, d1	15.0	19.0		11.3	11.0		20.2	16.4	13.0	15.4	18.0	15.8
Progression Factor	0.73	0.80		1.00	1.00		0.95	0.88	1.17	1.00	1.00	1.00
Incremental Delay, d2	0.9	5.5		1.2	1.5		17.9	0.5	0.4	1.1	1.4	0.9
Delay (s)	11.9	20.7		12.5	12.6		37.2	14.9	15.6	16.5	19.4	16.7
Level of Service	B	C		B	B		D	B	B	B	B	B
Approach Delay (s)		19.7			12.5			20.2			18.7	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM Average Control Delay	17.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↕			↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	1.00
Frbp, ped/bikes		1.00	1.00		0.92		1.00	0.93			1.00	0.30
Flpb, ped/bikes		0.98	1.00		0.94		0.85	1.00			0.97	1.00
Frt		1.00	0.85		0.97		1.00	0.98			1.00	0.85
Flt Protected		0.99	1.00		0.99		0.95	1.00			0.99	1.00
Satd. Flow (prot)		1614	1417		1387		1351	2883			3052	420
Flt Permitted		0.87	1.00		0.93		0.22	1.00			0.82	1.00
Satd. Flow (perm)		1414	1417		1303		313	2883			2502	420
Volume (vph)	39	165	125	67	335	127	166	487	58	96	786	61
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	40	170	129	69	345	131	171	502	60	99	810	63
RTOR Reduction (vph)	0	0	129	0	1	0	0	3	0	0	0	4
Lane Group Flow (vph)	0	210	0	0	544	0	171	559	0	0	909	59
Confl. Peds. (#/hr)	570		715	715		570	814		795	795		814
Confl. Bikes (#/hr)			9			12			43			28
Turn Type	Perm		NA	Perm			Perm			Perm		Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		2
Actuated Green, G (s)		30.5	0.0		30.5		34.1	34.1			34.1	34.1
Effective Green, g (s)		32.0	0.0		32.0		35.0	35.0			35.0	35.0
Actuated g/C Ratio		0.43	0.00		0.43		0.47	0.47			0.47	0.47
Clearance Time (s)		5.5			5.5		4.9	4.9			4.9	4.9
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		603	0		556		146	1345			1168	196
v/s Ratio Prot								0.19				
v/s Ratio Perm		0.15			c0.42		c0.55				0.36	0.14
v/c Ratio		0.35	0.00		0.98		1.17	0.42			0.78	0.30
Uniform Delay, d1		14.5	37.5		21.2		20.0	13.2			16.8	12.4
Progression Factor		1.00	1.00		1.00		1.00	1.00			1.72	1.84
Incremental Delay, d2		1.6	0.0		33.2		127.9	0.9			4.7	3.6
Delay (s)		16.1	37.5		54.3		147.9	14.2			33.6	26.4
Level of Service		B	D		D		F	B			C	C
Approach Delay (s)		24.2			54.3			45.4			33.1	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	39.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	115.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕	↗		↕↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor		0.95			0.95			0.95	1.00		0.95	
Frbp, ped/bikes		0.79			0.98			1.00	0.54		0.98	
Flpb, ped/bikes		1.00			0.97			1.00	1.00		1.00	
Frt		0.90			0.99			1.00	0.85		0.99	
Flt Protected		1.00			0.98			1.00	1.00		1.00	
Satd. Flow (prot)		1585			2066			2235	540		2187	
Flt Permitted		0.91			0.54			1.00	1.00		0.95	
Satd. Flow (perm)		1446			1143			2235	540		2081	
Volume (vph)	22	197	472	281	410	30	0	879	506	5	1154	43
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	22	201	482	287	418	31	0	897	516	5	1178	44
RTOR Reduction (vph)	0	2	0	0	2	0	0	0	86	0	2	0
Lane Group Flow (vph)	0	703	0	0	734	0	0	897	430	0	1225	0
Confl. Peds. (#/hr)	238		195	195		238	518		548	548		518
Confl. Bikes (#/hr)			8			5			23			18
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		
Actuated Green, G (s)		63.5			63.5			76.0	76.0			76.0
Effective Green, g (s)		65.0			65.0			77.0	77.0			77.0
Actuated g/C Ratio		0.43			0.43			0.51	0.51			0.51
Clearance Time (s)		5.5			5.5			5.0	5.0			5.0
Vehicle Extension (s)		3.0			3.0			3.0	3.0			3.0
Lane Grp Cap (vph)		627			495			1147	277			1068
v/s Ratio Prot								0.40				
v/s Ratio Perm		0.49			c0.64				c0.80			0.59
v/c Ratio		1.55dr			2.16dl			0.78	1.55			1.15
Uniform Delay, d1		42.5			42.5			29.7	36.5			36.5
Progression Factor		0.75			1.03			1.67	2.22			1.00
Incremental Delay, d2		57.0			218.0			0.5	250.0			77.4
Delay (s)		88.9			261.8			50.0	331.1			113.9
Level of Service		F			F			D	F			F
Approach Delay (s)		88.9			261.8			152.7				113.9
Approach LOS		F			F			F				F

Intersection Summary

HCM Average Control Delay	149.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	162.1%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑		↔↔	↑↑↑		↔	↑↑↑		↔	↑↑↑	↔
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		0.97	0.86		1.00	0.91		1.00	0.86	0.86
Frbp, ped/bikes	1.00	0.95		1.00	0.99		1.00	0.94		1.00	0.99	0.71
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.93	1.00	1.00
Frt	1.00	0.98		1.00	1.00		1.00	0.98		1.00	0.99	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	2168	3790		2168	3993		1118	2967		1043	2987	614
Flt Permitted	0.95	1.00		0.95	1.00		0.06	1.00		0.21	1.00	1.00
Satd. Flow (perm)	2168	3790		2168	3993		75	2967		235	2987	614
Volume (vph)	264	2315	340	45	2805	81	732	1015	174	333	1332	360
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	275	2411	354	47	2922	84	762	1057	181	347	1388	375
RTOR Reduction (vph)	0	17	0	0	3	0	0	16	0	0	2	1
Lane Group Flow (vph)	275	2748	0	47	3003	0	762	1222	0	347	1435	325
Conf. Peds. (#/hr)	262		298	298		262	247		444	444		247
Conf. Bikes (#/hr)			4			3			8			8
Turn Type	Prot			Prot		pm+pt			Perm		pm+ov	
Protected Phases	5	2		1	6	3	8			4	4	5
Permitted Phases						8				4		4
Actuated Green, G (s)	7.0	48.5		4.0	45.5	82.1	82.1		57.1	57.1	64.1	
Effective Green, g (s)	7.0	50.0		4.0	47.0	84.0	84.0		59.0	59.0	66.0	
Actuated g/C Ratio	0.05	0.33		0.03	0.31	0.56	0.56		0.39	0.39	0.44	
Clearance Time (s)	4.0	5.5		4.0	5.5	4.0	5.9		5.9	5.9	4.0	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	3.0	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	101	1263		58	1251	188	1662		92	1175	287	
v/s Ratio Prot	c0.13	0.73		0.02	c0.75	c0.57	0.41			0.48	0.05	
v/s Ratio Perm						c1.71			1.48		0.48	
v/c Ratio	2.72	2.18		0.81	2.40	4.05	0.74		3.77	1.22	1.13	
Uniform Delay, d1	71.5	50.0		72.6	51.5	49.9	24.7		45.5	45.5	42.0	
Progression Factor	1.21	0.90		1.14	1.19	1.00	1.00		1.06	1.07	1.14	
Incremental Delay, d2	777.8	529.2		7.2	630.5	1386.5	1.5		1249.7	100.2	64.7	
Delay (s)	864.4	574.3		90.1	691.6	1436.4	26.2		1298.1	148.7	112.6	
Level of Service	F	F		F	F	F	C		F	F	F	
Approach Delay (s)		600.6			682.3		563.5			332.1		
Approach LOS		F			F		F			F		

Intersection Summary

HCM Average Control Delay	562.2	HCM Level of Service	F
HCM Volume to Capacity ratio	3.38		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	201.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.94			0.95		1.00	0.98		1.00	0.98	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1090			1099		1118	2181		1118	2198	
Flt Permitted		0.66			0.68		0.15	1.00		0.15	1.00	
Satd. Flow (perm)		728			765		181	2181		181	2198	
Volume (vph)	116	86	153	364	240	327	60	1313	252	220	1275	159
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	135	100	178	423	279	380	70	1527	293	256	1483	185
RTOR Reduction (vph)	0	6	0	0	5	0	0	27	0	0	16	0
Lane Group Flow (vph)	0	407	0	0	1077	0	70	1793	0	256	1652	0
Turn Type		Perm		Perm		Perm		Perm		Perm		Perm
Protected Phases		4		4		4		2		2		2
Permitted Phases		4		4		2		2		2		2
Actuated Green, G (s)		25.0		25.0		25.6	25.6	25.6		25.6	25.6	25.6
Effective Green, g (s)		26.0		26.0		26.0	26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio		0.43		0.43		0.43	0.43	0.43		0.43	0.43	0.43
Clearance Time (s)		5.0		5.0		4.4	4.4	4.4		4.4	4.4	4.4
Vehicle Extension (s)		3.0		3.0		3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		315		332		78	945	78		952	78	952
v/s Ratio Prot							0.82				0.75	
v/s Ratio Perm		0.56		c1.41		0.39		c1.41				
v/c Ratio		1.29		3.24		0.90	1.90	3.28		1.74		
Uniform Delay, d1		17.0		17.0		15.8	17.0	17.0		17.0	17.0	17.0
Progression Factor		1.00		1.00		0.31	0.31	1.00		1.00	1.00	1.00
Incremental Delay, d2		153.6		1017.4		14.0	404.3	1059.1		335.3		
Delay (s)		170.6		1034.4		18.9	409.6	1076.1		352.3		
Level of Service		F		F		B	F	F		F		F
Approach Delay (s)		170.6		1034.4			395.1			448.6		
Approach LOS		F		F			F			F		F

Intersection Summary

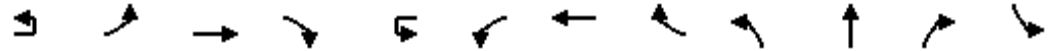
HCM Average Control Delay	527.3	HCM Level of Service	F
HCM Volume to Capacity ratio	3.26		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	217.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	1102		1118	1156		1118	2205		1118	2190	
Flt Permitted	0.41	1.00		0.16	1.00		0.15	1.00		0.15	1.00	
Satd. Flow (perm)	479	1102		188	1156		174	2205		174	2190	
Volume (vph)	151	368	269	73	340	45	91	1523	152	44	1697	263
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	154	376	274	74	347	46	93	1554	155	45	1732	268
RTOR Reduction (vph)	0	3	0	0	5	0	0	13	0	0	20	0
Lane Group Flow (vph)	154	647	0	74	388	0	93	1696	0	45	1980	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		4		4		2		2		2	
Permitted Phases	4		4		4		2		2		2	
Actuated Green, G (s)	23.4	23.4		23.4	23.4		26.5	26.5		26.5	26.5	
Effective Green, g (s)	25.0	25.0		25.0	25.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.45	0.45		0.45	0.45	
Clearance Time (s)	5.6	5.6		5.6	5.6		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	200	459		78	482		78	992		78	986	
v/s Ratio Prot	c0.59				0.34		0.77				c0.90	
v/s Ratio Perm	0.32		0.39		0.53		0.26					
v/c Ratio	0.77	1.41		0.95	0.80		1.19	1.71		0.58	2.01	
Uniform Delay, d1	15.0	17.5		16.9	15.4		16.5	16.5		12.3	16.5	
Progression Factor	0.56	0.52		1.00	1.00		1.63	1.74		0.68	0.71	
Incremental Delay, d2	9.0	191.0		83.5	9.4		97.9	319.9		2.8	453.8	
Delay (s)	17.3	200.1		100.4	24.8		124.8	348.7		11.2	465.5	
Level of Service	B		F		C		F		B		F	
Approach Delay (s)	165.1		36.8		337.1		455.5					
Approach LOS	F		D		F		F					

Intersection Summary

HCM Average Control Delay	330.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.72		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	172.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔↔	↔↔↔	↔		↔↔	↔↔↔	↔	↔	↔↔		↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		0.97	0.91	1.00		0.97	0.91	1.00	1.00	0.95		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		3072	4550	1417		3072	4550	1417	1583	3159		1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.09	1.00		0.08
Satd. Flow (perm)		3072	4550	1417		3072	4550	1417	148	3159		141
Volume (vph)	3	305	2086	104	22	265	2083	357	117	1382	24	554
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	3	308	2107	105	22	268	2104	361	118	1396	24	560
RTOR Reduction (vph)	0	0	0	22	0	0	0	17	0	1	0	0
Lane Group Flow (vph)	0	311	2107	83	0	290	2104	344	118	1419	0	560
Turn Type	Prot	Prot	pm+ov		Prot	Prot	pm+ov	pm+pt				pm+pt
Protected Phases	1	1	6	3	5	5	2	7	3	8		7
Permitted Phases				6				2	8			4
Actuated Green, G (s)		16.1	29.6	39.2		15.9	29.4	41.4	51.9	42.3		56.7
Effective Green, g (s)		16.1	31.1	40.7		15.9	30.9	42.9	54.6	45.0		59.4
Actuated g/C Ratio		0.13	0.26	0.34		0.13	0.26	0.36	0.46	0.38		0.49
Clearance Time (s)		4.0	5.5	4.0		4.0	5.5	4.0	4.0	6.7		4.0
Vehicle Extension (s)		3.0	5.0	3.0		3.0	5.0	3.0	3.0	4.0		3.0
Lane Grp Cap (vph)		412	1179	528		407	1172	554	182	1185		214
v/s Ratio Prot		c0.10	c0.46	0.01		0.09	0.46	0.06	0.05	0.45		c0.26
v/s Ratio Perm				0.05				0.18	0.24			c1.04
v/c Ratio		0.75	1.79	0.16		0.71	1.80	0.62	0.65	1.20		2.62
Uniform Delay, d1		50.0	44.5	27.7		49.9	44.6	31.8	27.7	37.5		56.2
Progression Factor		1.51	0.75	0.26		1.57	0.76	0.07	1.00	1.00		1.33
Incremental Delay, d2		0.7	354.5	0.0		0.5	358.2	0.2	7.7	97.2		728.8
Delay (s)		76.3	387.9	7.1		79.0	391.8	2.4	35.4	134.7		803.4
Level of Service		E	F	A		E	F	A	D	F		F
Approach Delay (s)			333.6				307.9			127.1		
Approach LOS			F				F			F		

Intersection Summary			
HCM Average Control Delay	285.4	HCM Level of Service	F
HCM Volume to Capacity ratio	2.07		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	146.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Ideal Flow (vphpl)	1700	1700
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3167	1417
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3167	1417
Volume (vph)	1560	107
Peak-hour factor, PHF	0.99	0.99
Adj. Flow (vph)	1576	108
RTOR Reduction (vph)	0	42
Lane Group Flow (vph)	1576	66
Turn Type		Perm
Protected Phases	4	
Permitted Phases		4
Actuated Green, G (s)	44.7	44.7
Effective Green, g (s)	47.4	47.4
Actuated g/C Ratio	0.39	0.39
Clearance Time (s)	6.7	6.7
Vehicle Extension (s)	4.0	4.0
Lane Grp Cap (vph)	1251	560
v/s Ratio Prot	0.50	
v/s Ratio Perm		0.05
v/c Ratio	1.26	0.12
Uniform Delay, d1	36.3	23.0
Progression Factor	1.09	1.23
Incremental Delay, d2	117.5	0.0
Delay (s)	157.0	28.3
Level of Service	F	C
Approach Delay (s)	312.1	
Approach LOS	F	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↗↖↗		↖	↗↖↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.86		1.00	0.95		1.00	0.95	
Fr _t	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4521		1583	5680		1583	3148		1583	3139	
Fl _t Permitted	0.14	1.00		0.12	1.00		0.15	1.00		0.13	1.00	
Satd. Flow (perm)	225	4521		198	5680		247	3148		215	3139	
Volume (vph)	38	2263	100	161	3122	207	79	1282	54	282	1513	92
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	40	2357	104	168	3252	216	82	1335	56	294	1576	96
RTOR Reduction (vph)	0	5	0	0	11	0	0	4	0	0	0	0
Lane Group Flow (vph)	40	2456	0	168	3457	0	82	1388	0	294	1672	0
Turn Type	Perm		pm+pt		Perm		pm+pt		Perm		pm+pt	
Protected Phases	2		1		6		8		7		4	
Permitted Phases	2		6		8		4		8		4	
Actuated Green, G (s)	28.6	28.6		41.0	41.0		25.6	25.6		38.6	38.6	
Effective Green, g (s)	29.6	29.6		42.0	42.0		27.0	27.0		40.0	40.0	
Actuated g/C Ratio	0.33	0.33		0.47	0.47		0.30	0.30		0.44	0.44	
Clearance Time (s)	5.0	5.0		3.5	5.0		5.4	5.4		3.5	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	1487		222	2651		74	944		232	1395	
v/s Ratio Prot	c0.54		0.07		c0.61		c0.44		0.13		c0.53	
v/s Ratio Perm	0.18		0.28		0.33		0.44		0.44			
v/c Ratio	0.54	1.65		0.76	1.30		1.11	1.47		1.27	1.20	
Uniform Delay, d ₁	24.6	30.2		20.6	24.0		31.5	31.5		42.7	25.0	
Progression Factor	1.78	1.71		2.14	0.58		0.99	0.96		1.00	1.00	
Incremental Delay, d ₂	2.5	293.4		1.4	137.1		121.1	215.6		149.8	96.6	
Delay (s)	46.3	345.1		45.4	151.0		152.4	245.9		192.5	121.6	
Level of Service	D		D		F		F		F		F	
Approach Delay (s)	340.3		146.1		240.7		132.2					
Approach LOS	F		F		F		F					

Intersection Summary

HCM Average Control Delay	208.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	135.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.99
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	4550	1417	1583	3167	1417	1583	3125	3125
Flt Permitted	0.14	1.00	1.00	0.14	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	225	4550	1417	225	4550	1417	1583	3167	1417	1583	3125	3125
Volume (vph)	183	1886	302	351	2248	443	274	761	88	308	1149	111
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	185	1905	305	355	2271	447	277	769	89	311	1161	112
RTOR Reduction (vph)	0	0	7	0	0	50	0	0	0	0	8	0
Lane Group Flow (vph)	185	1905	298	355	2271	397	277	769	89	311	1265	0
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	Prot		pm+ov		Prot	
Protected Phases	1	6	3	5	2	7	3	8	5	7	4	
Permitted Phases	6		6	2		2			8			
Actuated Green, G (s)	34.2	27.7	35.6	34.2	27.7	34.2	7.9	31.2	37.7	6.5	29.8	
Effective Green, g (s)	35.6	29.6	37.0	35.6	29.6	35.6	7.4	32.4	38.4	6.0	31.0	
Actuated g/C Ratio	0.40	0.33	0.41	0.40	0.33	0.40	0.08	0.36	0.43	0.07	0.34	
Clearance Time (s)	3.5	5.9	3.5	3.5	5.9	3.5	3.5	5.2	3.5	3.5	5.2	
Vehicle Extension (s)	3.0	5.0	3.0	3.0	5.0	3.0	3.0	5.0	3.0	3.0	5.0	
Lane Grp Cap (vph)	180	1496	583	180	1496	623	130	1140	668	106	1076	
v/s Ratio Prot	0.07	0.42	0.04	c0.13	0.50	0.04	c0.17	0.24	0.01	c0.20	c0.40	
v/s Ratio Perm	0.34		0.17	c0.65		0.24			0.05			
v/c Ratio	1.03	1.27	0.51	1.97	1.52	0.64	2.13	0.67	0.13	2.93	1.18	
Uniform Delay, d1	44.2	30.2	19.8	44.2	30.2	22.0	41.3	24.3	15.7	42.0	29.5	
Progression Factor	0.96	0.71	0.75	1.00	1.00	1.00	1.00	1.00	1.00	1.28	1.10	
Incremental Delay, d2	27.6	123.5	0.1	456.9	236.6	2.1	533.7	2.1	0.1	872.6	80.1	
Delay (s)	69.9	144.9	14.9	501.2	266.8	24.1	575.0	26.4	15.8	926.5	112.6	
Level of Service	E	F	B	F	F	C	F	C	B	F	F	
Approach Delay (s)		122.6			258.6			159.5			272.4	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	207.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	132.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↕		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.95		1.00	1.00	0.75	1.00	0.86		1.00	0.99	
Flpb, ped/bikes	0.84	1.00		0.66	1.00	1.00	0.94	1.00		0.89	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.92		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1328	1553		1040	1667	1062	1488	2491		1406	3124	
Flt Permitted	0.52	1.00		0.70	1.00	1.00	0.21	1.00		0.44	1.00	
Satd. Flow (perm)	727	1553		766	1667	1062	336	2491		657	3124	
Volume (vph)	10	73	10	287	205	85	94	217	278	139	978	26
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	78	11	305	218	90	100	231	296	148	1040	28
RTOR Reduction (vph)	0	6	0	0	0	65	0	38	0	0	3	0
Lane Group Flow (vph)	11	83	0	305	218	25	100	489	0	148	1065	0
Conf. Peds. (#/hr)	212		207	207		212	177		203	203		177
Conf. Bikes (#/hr)			13			9			15			12
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4	2			2		
Actuated Green, G (s)	20.2	20.2		20.2	20.2	20.2	45.3	45.3		45.3	45.3	
Effective Green, g (s)	21.0	21.0		21.0	21.0	21.0	46.0	46.0		46.0	46.0	
Actuated g/C Ratio	0.28	0.28		0.28	0.28	0.28	0.61	0.61		0.61	0.61	
Clearance Time (s)	4.8	4.8		4.8	4.8	4.8	4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	204	435		214	467	297	206	1528		403	1916	
v/s Ratio Prot		0.05			0.13			0.20			0.34	
v/s Ratio Perm	0.02			0.40		0.02	0.30			0.23		
v/c Ratio	0.05	0.19		1.43	0.47	0.08	0.49	0.32		0.37	0.56	
Uniform Delay, d1	19.7	20.5		27.0	22.4	19.9	8.0	7.0		7.2	8.5	
Progression Factor	1.00	1.00		1.03	1.02	1.26	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	1.0		213.9	3.0	0.5	8.0	0.6		2.6	1.2	
Delay (s)	20.2	21.5		241.6	25.8	25.6	16.0	7.5		9.8	9.7	
Level of Service	C	C		F	C	C	B	A		A	A	
Approach Delay (s)		21.4			133.1			8.9			9.7	
Approach LOS		C			F			A			A	

Intersection Summary

HCM Average Control Delay	39.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↘		↗	↕	↘	↗	↕	↘
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes		0.99		1.00	0.85		1.00	1.00	0.72	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		0.97	1.00	1.00	0.93	1.00	
Frt		0.93		1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1069		1118	851		1089	2235	722	1043	2234	
Flt Permitted		0.99		0.76	1.00		0.20	1.00	1.00	0.26	1.00	
Satd. Flow (perm)		1069		888	851		231	2235	722	289	2234	
Volume (vph)	1	1	2	229	8	243	3	825	155	536	975	2
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1	1	2	234	8	248	3	842	158	547	995	2
RTOR Reduction (vph)	0	2	0	0	131	0	0	0	78	0	0	0
Lane Group Flow (vph)	0	2	0	234	125	0	3	842	80	547	997	0
Conf. Peds. (#/hr)	82						82	77		239	239	77
Conf. Bikes (#/hr)			2			6			9			5
Turn Type	Split		Perm			Perm		Perm custom				
Protected Phases	3	3			4			6				
Permitted Phases				4			6		6	2	2	
Actuated Green, G (s)		1.4		21.8	21.8		37.2	37.2	37.2	37.2	37.2	
Effective Green, g (s)		2.4		22.8	22.8		37.8	37.8	37.8	37.8	37.8	
Actuated g/C Ratio		0.03		0.30	0.30		0.50	0.50	0.50	0.50	0.50	
Clearance Time (s)		5.0		5.0	5.0		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		34		270	259		116	1126	364	146	1126	
v/s Ratio Prot		c0.00			0.15			0.38				
v/s Ratio Perm				c0.26			0.01		0.11	c1.89	0.45	
v/c Ratio		0.06		0.87	0.48		0.03	0.75	0.22	3.75	0.89	
Uniform Delay, d1		35.2		24.7	21.3		9.3	14.8	10.4	18.6	16.7	
Progression Factor		1.00		1.78	3.17		1.07	1.34	2.48	1.00	1.00	
Incremental Delay, d2		0.8		2.9	0.1		0.0	0.4	0.1	1252.6	10.3	
Delay (s)		36.0		46.9	67.6		10.1	20.2	25.8	1271.2	27.0	
Level of Service		D		D	E		B	C	C	F	C	
Approach Delay (s)		36.0			57.7			21.1			467.7	
Approach LOS		D			E			C			F	

Intersection Summary			
HCM Average Control Delay	253.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.57		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	122.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		1.00	0.86		1.00	0.95	1.00	1.00	1.00	0.88
Frbp, ped/bikes	1.00	0.96		1.00	0.97		1.00	1.00	0.68	1.00	1.00	0.79
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00	1.00	0.80	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3870		1109	3891		1118	2235	684	889	1176	1394
Flt Permitted	0.95	1.00		0.06	1.00		0.10	1.00	1.00	0.57	1.00	1.00
Satd. Flow (perm)	2168	3870		75	3891		115	2235	684	535	1176	1394
Volume (vph)	333	2547	164	44	3453	312	345	282	83	250	493	524
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	347	2653	171	46	3597	325	359	294	86	260	514	546
RTOR Reduction (vph)	0	6	0	0	9	0	0	0	1	0	0	0
Lane Group Flow (vph)	347	2818	0	46	3913	0	359	294	85	260	514	546
Conf. Peds. (#/hr)	205		294	294		205	339		235	235		339
Conf. Bikes (#/hr)			4			9			6			5
Turn Type	Prot			Perm			pm+pt		Perm	Perm		pm+ov
Protected Phases	1	6			2		3	8			4	1
Permitted Phases				2			8		8	4		4
Actuated Green, G (s)	24.9	90.0		61.1	61.1		49.2	49.2	49.2	35.2	35.2	60.1
Effective Green, g (s)	24.9	91.0		62.1	62.1		51.0	51.0	51.0	37.0	37.0	61.9
Actuated g/C Ratio	0.17	0.61		0.41	0.41		0.34	0.34	0.34	0.25	0.25	0.41
Clearance Time (s)	4.0	5.0		5.0	5.0		4.0	5.8	5.8	5.8	5.8	4.0
Vehicle Extension (s)	2.0	4.0		4.0	4.0		2.0	3.0	3.0	3.0	3.0	2.0
Lane Grp Cap (vph)	360	2348		31	1611		106	760	233	132	290	612
v/s Ratio Prot	0.16	c0.73			c1.01		c0.23	0.13			0.44	0.15
v/s Ratio Perm				0.61			c0.93		0.12	0.49		0.24
v/c Ratio	0.96	1.20		1.48	2.43		3.39	0.39	0.37	1.97	1.77	0.89
Uniform Delay, d1	62.1	29.5		44.0	44.0		72.2	37.6	37.3	56.5	56.5	40.9
Progression Factor	0.84	1.49		0.48	0.50		1.00	1.00	1.00	0.93	0.93	1.05
Incremental Delay, d2	7.6	90.4		232.7	643.1		1097.6	0.3	1.0	453.2	356.4	10.2
Delay (s)	59.9	134.4		253.7	664.9		1169.8	37.9	38.3	505.8	408.9	53.1
Level of Service	E	F		F	F		F	D	D	F	F	D
Approach Delay (s)		126.2			660.1			587.8			280.8	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	415.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.54		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	187.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 95: Sunset Blvd & Veteran Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑		↖		↖		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0			
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00			
Frt		0.99		1.00	1.00		1.00		0.85			
Flt Protected		1.00		0.95	1.00		0.95		1.00			
Satd. Flow (prot)		3124		1583	3167		1583		1417			
Flt Permitted		1.00		0.08	1.00		0.76		1.00			
Satd. Flow (perm)		3124		136	3167		1262		1417			
Volume (vph)	0	1574	156	706	1680	0	382	0	903	0	0	0
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1623	161	728	1732	0	394	0	931	0	0	0
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	271	0	0	0
Lane Group Flow (vph)	0	1778	0	728	1732	0	394	0	660	0	0	0
Turn Type				pm+pt			custom		Over	Perm		
Protected Phases		2		1	6				1		4	
Permitted Phases				6			8			4		
Actuated Green, G (s)		44.0		86.0	86.0		25.0		38.0			
Effective Green, g (s)		45.0		87.0	87.0		25.0		38.0			
Actuated g/C Ratio		0.38		0.72	0.72		0.21		0.32			
Clearance Time (s)		5.0		4.0	5.0		4.0		4.0			
Vehicle Extension (s)		4.0		3.0	3.0		3.0		3.0			
Lane Grp Cap (vph)		1172		557	2296		263		449			
v/s Ratio Prot		c0.57		0.41	0.55				c0.47			
v/s Ratio Perm				0.53			c0.31					
v/c Ratio		1.52		1.31	0.75		1.50		1.47			
Uniform Delay, d1		37.5		43.2	10.0		47.5		41.0			
Progression Factor		1.00		0.94	0.88		1.00		1.00			
Incremental Delay, d2		237.0		147.8	1.8		243.1		223.1			
Delay (s)		274.5		188.3	10.6		290.6		264.1			
Level of Service		F		F	B		F		F			
Approach Delay (s)		274.5			63.2			272.0			0.0	
Approach LOS		F			E			F			A	
Intersection Summary												
HCM Average Control Delay			180.6				HCM Level of Service		F			
HCM Volume to Capacity ratio			1.50									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			131.5%				ICU Level of Service		H			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		0.97	0.86		1.00	0.95	1.00	1.00	0.95	0.88
Frbp, ped/bikes	1.00	0.97		1.00	0.99		1.00	1.00	0.93	1.00	1.00	0.91
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3874		2168	3935		1118	2235	928	1107	2235	1607
Flt Permitted	0.95	1.00		0.95	1.00		0.10	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	2168	3874		2168	3935		112	2235	928	183	2235	1607
Volume (vph)	279	2793	238	19	3636	611	254	813	320	129	742	1111
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	303	3036	259	21	3952	664	276	884	348	140	807	1208
RTOR Reduction (vph)	0	9	0	0	20	0	0	0	0	0	0	0
Lane Group Flow (vph)	303	3286	0	21	4596	0	276	884	348	140	807	1208
Conf. Peds. (#/hr)	16		137	137		16	73		33	33		73
Conf. Bikes (#/hr)			14			12			27			14
Turn Type	Prot			Prot		pm+pt		pm+ov	Perm		pm+ov	
Protected Phases	5	2		1	6	3	8	1		4	4	5
Permitted Phases						8		8	4			4
Actuated Green, G (s)	22.0	80.5		5.0	63.5	48.1	48.1	53.1	39.1	39.1	61.1	
Effective Green, g (s)	22.0	82.0		5.0	65.0	51.0	51.0	56.0	42.0	42.0	64.0	
Actuated g/C Ratio	0.15	0.55		0.03	0.43	0.34	0.34	0.37	0.28	0.28	0.43	
Clearance Time (s)	4.0	5.5		4.0	5.5	4.0	6.9	4.0	6.9	6.9	4.0	
Vehicle Extension (s)	1.0	4.0		1.0	4.0	3.0	2.0	1.0	2.0	2.0	1.0	
Lane Grp Cap (vph)	318	2118		72	1705	72	760	371	51	626	686	
v/s Ratio Prot	0.14	0.85		0.01	c1.17	c0.13	0.40	0.03		0.36	c0.26	
v/s Ratio Perm						c1.18		0.34	0.77		0.49	
v/c Ratio	0.95	1.55		0.29	2.70	3.83	1.16	0.94	2.75	1.29	1.76	
Uniform Delay, d1	63.5	34.0		70.8	42.5	46.9	49.5	45.3	54.0	54.0	43.0	
Progression Factor	0.62	0.29		1.31	0.47	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.0	248.4		0.1	763.1	1308.0	87.6	30.6	837.4	141.9	348.4	
Delay (s)	46.3	258.1		92.5	782.9	1354.9	137.1	75.9	891.4	195.9	391.4	
Level of Service	D	F		F	F	F	F	E	F	F	F	
Approach Delay (s)		240.3			779.7		345.8			350.7		
Approach LOS		F			F		F			F		

Intersection Summary			
HCM Average Control Delay	483.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.94		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	198.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖↖	↑↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.86		0.97	0.81		1.00	0.95		1.00	0.95	
Fr't	1.00	0.99		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	4004		2168	4705		1118	2183		1118	2195	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1118	4004		2168	4705		1118	2183		1118	2195	
Volume (vph)	119	2500	189	529	3051	277	72	1271	234	293	1001	136
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	124	2604	197	551	3178	289	75	1324	244	305	1043	142
RTOR Reduction (vph)	0	7	0	0	11	0	0	10	0	0	7	0
Lane Group Flow (vph)	124	2794	0	551	3456	0	75	1558	0	305	1178	0
Turn Type	Prot		Prot		Prot		Prot		Prot			
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	12.0	63.8		21.0	72.8		12.7	33.0		12.7	33.0	
Effective Green, g (s)	12.0	65.3		21.0	74.3		12.7	35.0		12.7	35.0	
Actuated g/C Ratio	0.08	0.44		0.14	0.50		0.08	0.23		0.08	0.23	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	1.0	4.0		1.0	4.0		1.0	4.0		1.0	4.0	
Lane Grp Cap (vph)	89	1743		304	2331		95	509		95	512	
v/s Ratio Prot	0.11	c0.70		c0.25	0.73		0.07	c0.71		c0.27	0.54	
v/s Ratio Perm												
v/c Ratio	1.39	1.60		1.81	1.48		0.79	3.06		3.21	2.30	
Uniform Delay, d1	69.0	42.4		64.5	37.9		67.3	57.5		68.7	57.5	
Progression Factor	1.03	0.94		0.71	0.51		1.00	1.00		1.00	1.00	
Incremental Delay, d2	183.2	271.5		366.8	217.5		31.9	932.7		1021.5	591.6	
Delay (s)	254.4	311.2		412.7	236.6		99.2	990.2		1090.2	649.1	
Level of Service	F	F		F	F		F	F		F	F	
Approach Delay (s)		308.8			260.8			949.5			739.4	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	457.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.17		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	192.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 98: Olympic Blvd & Sepulveda Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕	↖	↖	↕↕	↖	↖	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	4494		1583	4550	1417	1583	3167	1417	1583	3125	
Flt Permitted	0.12	1.00		0.95	1.00	1.00	0.11	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	207	4494		1583	4550	1417	185	3167	1417	185	3125	
Volume (vph)	120	2126	190	144	3164	189	33	1542	79	98	1133	110
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	122	2169	194	147	3229	193	34	1573	81	100	1156	112
RTOR Reduction (vph)	0	12	0	0	0	2	0	0	20	0	0	0
Lane Group Flow (vph)	122	2351	0	147	3229	191	34	1573	61	100	1268	0
Turn Type	Perm			Prot		Perm	Perm		Perm	Perm		
Protected Phases		8		7	4			6			2	
Permitted Phases	8					4	6		6	2		
Actuated Green, G (s)	31.2	31.2		10.3	45.0	45.0	35.0	35.0	35.0	35.0	35.0	
Effective Green, g (s)	32.2	32.2		9.8	46.0	46.0	36.0	36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.36	0.36		0.11	0.51	0.51	0.40	0.40	0.40	0.40	0.40	
Clearance Time (s)	5.0	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	74	1608		172	2326	724	74	1267	567	74	1250	
v/s Ratio Prot		0.52		0.09	c0.71			0.50			0.41	
v/s Ratio Perm	c0.59					0.13	0.18		0.04	c0.54		
v/c Ratio	1.65	1.46		0.85	1.39	0.26	0.46	1.24	0.11	1.35	1.01	
Uniform Delay, d1	28.9	28.9		39.4	22.0	12.4	19.8	27.0	16.9	27.0	27.0	
Progression Factor	0.82	0.79		1.08	0.55	0.21	0.99	0.91	1.14	1.00	1.00	
Incremental Delay, d2	333.3	210.7		4.0	174.9	0.1	1.8	109.3	0.0	224.1	29.1	
Delay (s)	356.9	233.6		46.6	187.0	2.7	21.5	133.8	19.4	251.1	56.1	
Level of Service	F	F		D	F	A	C	F	B	F	E	
Approach Delay (s)		239.7			171.2			126.1			70.3	
Approach LOS		F			F			F			E	

Intersection Summary

HCM Average Control Delay	166.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	146.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑↑		↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	4477		1583	3121		1583	3167	1417
Flt Permitted	0.18	1.00	1.00	0.15	1.00		0.95	1.00		0.11	1.00	1.00
Satd. Flow (perm)	303	4550	1417	256	4477		1583	3121		185	3167	1417
Volume (vph)	68	1840	250	222	1877	226	412	1570	166	184	1357	113
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	69	1859	253	224	1896	228	416	1586	168	186	1371	114
RTOR Reduction (vph)	0	0	11	0	16	0	0	9	0	0	0	2
Lane Group Flow (vph)	69	1859	242	224	2108	0	416	1745	0	186	1371	112
Turn Type	Perm		pm+ov	pm+pt			Prot			Perm		Perm
Protected Phases		6	3	5	2		3	8			4	
Permitted Phases	6		6	2						4		4
Actuated Green, G (s)	20.5	20.5	32.0	29.5	29.5		11.5	50.5		35.5	35.5	35.5
Effective Green, g (s)	22.0	22.0	33.0	31.0	31.0		11.0	51.0		36.0	36.0	36.0
Actuated g/C Ratio	0.24	0.24	0.37	0.34	0.34		0.12	0.57		0.40	0.40	0.40
Clearance Time (s)	5.5	5.5	3.5	3.0	5.5		3.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	2.0	3.0	3.0		2.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	1112	583	162	1542		193	1769		74	1267	567
v/s Ratio Prot		c0.41	0.05	0.08	c0.47		c0.26	0.56			0.43	
v/s Ratio Perm	0.23		0.12	0.40						c1.00		0.08
v/c Ratio	0.93	1.67	0.42	1.38	1.37		2.16	0.99		2.51	1.08	0.20
Uniform Delay, d1	33.3	34.0	21.3	44.7	29.5		39.5	19.2		27.0	27.0	17.6
Progression Factor	1.00	1.00	1.00	1.67	1.55		1.00	1.00		1.44	1.44	1.49
Incremental Delay, d2	87.0	306.3	0.2	175.8	165.6		536.8	18.4		694.2	42.3	0.3
Delay (s)	120.2	340.3	21.5	250.3	211.3		576.3	37.6		733.0	81.1	26.4
Level of Service	F	F	C	F	F		F	D		F	F	C
Approach Delay (s)		296.3			215.1			140.8			150.0	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	204.0	HCM Level of Service	F
HCM Volume to Capacity ratio	2.16		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	135.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑		↙	↑↑↑	↙	↙	↑↑	↙	↙↙	↙↙	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	0.86	0.86	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (prot)	1303	3742		1304	3747	1129	1304	2608	1137	2243	2284	
Flt Permitted	0.07	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (perm)	96	3742		1304	3747	1129	1304	2608	1137	2243	2284	
Volume (vph)	22	1513	10	44	1754	1267	143	306	256	1021	216	7
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	22	1544	10	45	1790	1293	146	312	261	1042	220	7
RTOR Reduction (vph)	0	1	0	0	0	353	0	0	0	0	1	0
Lane Group Flow (vph)	22	1553	0	45	1790	940	146	312	261	695	573	0
Conf. Peds. (#/hr)	11		9	9		11	58		11	11		58
Conf. Bikes (#/hr)			6			8			10			4
Turn Type	Perm		Prot		Perm	Split	pm+ov		Split			
Protected Phases	6		5		2	3	3	5	4		4	
Permitted Phases	6					2	3					
Actuated Green, G (s)	59.7	59.7	10.0		73.7	73.7	21.3	21.3	31.3	40.0	40.0	
Effective Green, g (s)	60.7	60.7	10.0		74.7	74.7	22.3	22.3	32.3	41.0	41.0	
Actuated g/C Ratio	0.40	0.40	0.07		0.50	0.50	0.15	0.15	0.22	0.27	0.27	
Clearance Time (s)	5.0	5.0	4.0		5.0	5.0	5.0	5.0	4.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0	2.0		4.0	4.0	2.0	2.0	2.0	4.0	4.0	
Lane Grp Cap (vph)	39	1514	87		1866	562	194	388	245	613	624	
v/s Ratio Prot		0.42	0.03		0.48		0.11	0.12	c0.07	c0.31	0.25	
v/s Ratio Perm	0.23					c0.83			0.16			
v/c Ratio	0.56	1.03	0.52		0.96	1.67	0.75	0.80	1.07	1.13	1.07dl	
Uniform Delay, d1	34.4	44.6	67.7		36.2	37.6	61.2	61.7	58.9	54.5	52.9	
Progression Factor	1.68	1.67	1.17		0.99	3.76	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	39.2	27.5	0.2		1.9	303.5	13.6	10.9	75.8	79.1	18.8	
Delay (s)	96.9	102.2	79.2		37.6	444.9	74.8	72.6	134.7	133.6	71.7	
Level of Service	F	F	E		D	F	E	E	F	F	E	
Approach Delay (s)		102.2			206.5			95.6			105.6	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	150.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	146.3%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑	↗		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	0.98		1.00	1.00	0.85		0.99			1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.99	
Satd. Flow (prot)	1583	4476		1583	3167	1417		1655			3113	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.90			0.56	
Satd. Flow (perm)	1583	4476		1583	3167	1417		1483			1775	
Volume (vph)	193	958	117	90	1128	145	10	895	47	204	568	24
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	203	1008	123	95	1187	153	11	942	49	215	598	25
RTOR Reduction (vph)	0	14	0	0	0	86	0	1	0	0	3	0
Lane Group Flow (vph)	203	1117	0	95	1187	67	0	1001	0	0	835	0
Turn Type	Prot			Prot		Perm	Prot				Prot	
Protected Phases	1	6		5	2		3	8			7	4
Permitted Phases						2						
Actuated Green, G (s)	12.3	42.9		8.3	38.9	38.9		26.5			26.5	
Effective Green, g (s)	12.3	43.2		8.3	39.2	39.2		26.5			26.5	
Actuated g/C Ratio	0.14	0.48		0.09	0.44	0.44		0.29			0.29	
Clearance Time (s)	4.0	4.3		4.0	4.3	4.3		4.0			4.0	
Vehicle Extension (s)	3.0	5.7		3.0	5.5	5.5		3.0			3.0	
Lane Grp Cap (vph)	216	2148		146	1379	617		437			523	
v/s Ratio Prot	c0.13	0.25		0.06	c0.37							
v/s Ratio Perm						0.05		c0.67			0.47	
v/c Ratio	0.94	0.52		0.65	0.86	0.11		2.29			53.75dl	
Uniform Delay, d1	38.5	16.2		39.5	22.9	15.0		31.8			31.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	44.0	0.9		9.9	7.2	0.4		587.6			277.5	
Delay (s)	82.5	17.1		49.4	30.2	15.4		619.3			309.3	
Level of Service	F	B		D	C	B		F			F	
Approach Delay (s)		27.1			29.9			619.3			309.3	
Approach LOS		C			C			F			F	

Intersection Summary

HCM Average Control Delay	208.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	141.6%	ICU Level of Service	H
Analysis Period (min)	15		
dl	Defacto Left Lane. Recode with 1 though lane as a left lane.		
dr	Defacto Right Lane. Recode with 1 though lane as a right lane.		
c	Critical Lane Group		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑	↗	↗	↑↑	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.87	1.00	0.97	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		0.95	1.00	1.00	0.91	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	3731		1294	3740		1238	2608	1013	1191	2487	
Flt Permitted	0.07	1.00		0.12	1.00		0.19	1.00	1.00	0.59	1.00	
Satd. Flow (perm)	102	3731		167	3740		244	2608	1013	737	2487	
Volume (vph)	630	1470	23	72	1826	10	105	192	10	37	577	76
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	656	1531	24	75	1902	10	109	200	10	39	601	79
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	7	0	7	0
Lane Group Flow (vph)	656	1554	0	75	1912	0	109	200	3	39	673	0
Conf. Peds. (#/hr)	63		61	61		63	79		72	72		79
Conf. Bikes (#/hr)			9			13			4			9
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		6			2			8				4
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	98.5	98.5		98.5	98.5		43.0	43.0	43.0	43.0	43.0	
Effective Green, g (s)	99.0	99.0		99.0	99.0		43.0	43.0	43.0	43.0	43.0	
Actuated g/C Ratio	0.66	0.66		0.66	0.66		0.29	0.29	0.29	0.29	0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	67	2462		110	2468		70	748	290	211	713	
v/s Ratio Prot		0.42			0.51			0.08			0.27	
v/s Ratio Perm	c6.44			0.45			c0.45		0.00	0.05		
v/c Ratio	9.79	0.63		0.68	0.77		1.56	0.27	0.01	0.18	0.94	
Uniform Delay, d1	25.5	14.9		15.8	17.7		53.5	41.3	38.3	40.3	52.3	
Progression Factor	1.00	1.00		1.73	1.88		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3985.7	1.2		12.1	0.9		309.0	0.9	0.1	1.9	22.4	
Delay (s)	4011.2	16.1		39.4	34.4		362.5	42.2	38.3	42.2	74.8	
Level of Service	F	B		D	C		F	D	D	D	E	
Approach Delay (s)		1201.4			34.5			151.5			73.0	
Approach LOS		F			C			F			E	

Intersection Summary

HCM Average Control Delay	539.7	HCM Level of Service	F
HCM Volume to Capacity ratio	7.27		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	142.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.98			0.99		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1621			1643		1583	1664		1583	1667	1417
Flt Permitted		0.94			0.94		0.29	1.00		0.35	1.00	1.00
Satd. Flow (perm)		1536			1548		476	1664		586	1667	1417
Volume (vph)	66	452	104	19	216	19	93	496	5	93	581	77
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	69	471	108	20	225	20	97	517	5	97	605	80
RTOR Reduction (vph)	0	12	0	0	5	0	0	0	0	0	0	39
Lane Group Flow (vph)	0	636	0	0	260	0	97	522	0	97	605	41
Turn Type		Perm		Perm		Perm		Perm		Perm		Perm
Protected Phases		8		4		4		2		6		6
Permitted Phases		8		4		2		6		6		6
Actuated Green, G (s)		20.5		20.5		30.7		30.7		30.7		30.7
Effective Green, g (s)		21.0		21.0		31.0		31.0		31.0		31.0
Actuated g/C Ratio		0.35		0.35		0.52		0.52		0.52		0.52
Clearance Time (s)		4.5		4.5		4.3		4.3		4.3		4.3
Vehicle Extension (s)		3.0		3.0		3.0		3.0		3.0		3.0
Lane Grp Cap (vph)		538		542		246		860		303		861
v/s Ratio Prot								0.31				c0.36
v/s Ratio Perm		c0.41		0.17		0.20				0.17		0.03
v/c Ratio		1.18		0.48		0.39		0.61		0.32		0.06
Uniform Delay, d1		19.5		15.2		8.8		10.2		8.4		11.0
Progression Factor		1.00		1.00		1.13		1.02		1.00		1.00
Incremental Delay, d2		100.0		0.7		1.9		1.3		2.8		4.8
Delay (s)		119.5		15.9		11.8		11.7		11.2		15.8
Level of Service		F		B		B		B		B		A
Approach Delay (s)		119.5		15.9		11.7				14.3		
Approach LOS		F		B		B				B		

Intersection Summary

HCM Average Control Delay	43.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	107.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖		↖	↖↖↖		↖	↖	↖	↖	↖	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	3698		1304	3720		1304	1373	1167	1304	1369	
Flt Permitted	0.17	1.00		0.17	1.00		0.28	1.00	1.00	0.27	1.00	
Satd. Flow (perm)	239	3698		239	3720		384	1373	1167	376	1369	
Volume (vph)	38	1577	150	118	1694	86	98	576	96	59	560	10
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	39	1609	153	120	1729	88	100	588	98	60	571	10
RTOR Reduction (vph)	0	19	0	0	9	0	0	0	2	0	1	0
Lane Group Flow (vph)	39	1744	0	120	1808	0	100	588	96	60	580	0
Turn Type	Perm			Perm			Perm			Perm	Perm	
Protected Phases	2			2			4			4	4	
Permitted Phases	2			2			4			4	4	
Actuated Green, G (s)	22.4	22.4		22.4	22.4		28.0	28.0	28.0	28.0	28.0	
Effective Green, g (s)	23.0	23.0		23.0	23.0		29.0	29.0	29.0	29.0	29.0	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.48	0.48	0.48	0.48	0.48	
Clearance Time (s)	4.6	4.6		4.6	4.6		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)	92	1418		92	1426		186	664	564	182	662	
v/s Ratio Prot		0.47			0.49			c0.43			0.42	
v/s Ratio Perm	0.16			c0.50			0.26		0.08	0.16		
v/c Ratio	0.42	1.23		1.30	1.27		0.54	0.89	0.17	0.33	0.88	
Uniform Delay, d1	13.6	18.5		18.5	18.5		10.8	14.0	8.7	9.5	13.9	
Progression Factor	1.00	1.00		1.57	1.58		1.00	1.00	1.00	0.53	0.73	
Incremental Delay, d2	13.7	109.7		177.4	124.1		10.7	16.0	0.7	3.0	10.1	
Delay (s)	27.3	128.2		206.4	153.4		21.5	30.0	9.4	8.0	20.2	
Level of Service	C	F		F	F		C	C	A	A	C	
Approach Delay (s)		126.0			156.7			26.4			19.1	
Approach LOS		F			F			C			B	

Intersection Summary

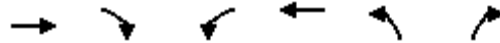
HCM Average Control Delay	109.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	131.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑	↗	↘	↑↑		↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.86	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4457		1583	5733	1417	1583	3073		1583	3167	1417
Flt Permitted	0.10	1.00		0.10	1.00	1.00	0.12	1.00		0.15	1.00	1.00
Satd. Flow (perm)	167	4457		167	5733	1417	208	3073		243	3167	1417
Volume (vph)	118	1363	216	210	1932	264	155	703	173	222	1233	62
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	123	1420	225	219	2012	275	161	732	180	231	1284	65
RTOR Reduction (vph)	0	24	0	0	0	34	0	15	0	0	0	15
Lane Group Flow (vph)	123	1621	0	219	2012	241	161	897	0	231	1284	50
Turn Type	Perm			Perm		pm+ov	pm+pt			pm+pt		Perm
Protected Phases		6			2	7	3	8		7	4	
Permitted Phases	6			2		2	8			4		4
Actuated Green, G (s)	39.0	39.0		39.0	39.0	45.0	36.1	30.1		36.1	30.1	30.1
Effective Green, g (s)	40.0	40.0		40.0	40.0	46.0	38.0	32.0		38.0	32.0	32.0
Actuated g/C Ratio	0.44	0.44		0.44	0.44	0.51	0.42	0.36		0.42	0.36	0.36
Clearance Time (s)	5.0	5.0		5.0	5.0	4.0	4.0	5.9		4.0	5.9	5.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	1981		74	2548	787	179	1093		192	1126	504
v/s Ratio Prot		0.36			0.35	0.02	0.06	0.29		c0.08	0.41	
v/s Ratio Perm	0.74			c1.31		0.15	0.32			c0.43		0.03
v/c Ratio	1.66	0.82		2.96	0.79	0.31	0.90	0.82		1.20	1.14	0.10
Uniform Delay, d1	25.0	21.8		25.0	21.4	12.7	22.2	26.4		22.4	29.0	19.4
Progression Factor	1.00	1.00		1.05	1.03	1.55	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	350.0	3.9		885.1	0.2	0.0	39.5	6.9		130.3	74.2	0.4
Delay (s)	375.0	25.7		911.2	22.2	19.8	61.7	33.3		152.8	103.2	19.8
Level of Service	F	C		F	C	B	E	C		F	F	B
Approach Delay (s)		50.0			99.6			37.6			107.0	
Approach LOS		D			F			D			F	

Intersection Summary

HCM Average Control Delay	79.0	HCM Level of Service	E
HCM Volume to Capacity ratio	2.10		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

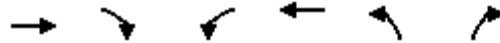


Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	0.99		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3696		1304	3747	1282	
Flt Permitted	1.00		0.07	1.00	0.96	
Satd. Flow (perm)	3696		97	3747	1282	
Volume (vph)	1931	191	67	1913	234	64
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	2011	199	70	1993	244	67
RTOR Reduction (vph)	11	0	0	0	5	0
Lane Group Flow (vph)	2199	0	70	1993	306	0
Turn Type			Perm			
Protected Phases	6			2	4	
Permitted Phases			2			
Actuated Green, G (s)	56.5		56.5	56.5	24.7	
Effective Green, g (s)	56.6		56.6	56.6	25.4	
Actuated g/C Ratio	0.63		0.63	0.63	0.28	
Clearance Time (s)	4.1		4.1	4.1	4.7	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2324		61	2356	362	
v/s Ratio Prot	0.59			0.53	c0.24	
v/s Ratio Perm			c0.72			
v/c Ratio	0.95		1.15	0.85	0.85	
Uniform Delay, d1	15.3		16.7	13.2	30.4	
Progression Factor	0.47		1.00	1.00	1.00	
Incremental Delay, d2	7.1		161.0	4.0	16.4	
Delay (s)	14.3		177.7	17.2	46.8	
Level of Service	B		F	B	D	
Approach Delay (s)	14.3			22.7	46.8	
Approach LOS	B			C	D	
Intersection Summary						
HCM Average Control Delay			20.3		HCM Level of Service	C
HCM Volume to Capacity ratio			1.05			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			97.6%		ICU Level of Service	F
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99			0.94			1.00	0.94
Flpb, ped/bikes	0.99	1.00		1.00	1.00			0.99			0.98	1.00
Frt	1.00	1.00		1.00	1.00			0.91			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.97	1.00
Satd. Flow (prot)	1291	3722		1299	3697			1153			1305	1095
Flt Permitted	0.07	1.00		0.07	1.00			0.94			0.77	1.00
Satd. Flow (perm)	92	3722		102	3697			1095			1038	1095
Volume (vph)	49	1843	47	84	1896	58	33	26	130	40	36	45
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	51	1920	49	88	1975	60	34	27	135	42	38	47
RTOR Reduction (vph)	0	2	0	0	2	0	0	7	0	0	0	4
Lane Group Flow (vph)	51	1967	0	88	2033	0	0	189	0	0	80	43
Conf. Peds. (#/hr)	123		38	38		123	46		63	63		46
Conf. Bikes (#/hr)			7			9						1
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	61.9	61.9		61.9	61.9			20.1			20.1	20.1
Effective Green, g (s)	61.9	61.9		61.9	61.9			20.1			20.1	20.1
Actuated g/C Ratio	0.69	0.69		0.69	0.69			0.22			0.22	0.22
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	63	2560		70	2543			245			232	245
v/s Ratio Prot		0.53			0.55							
v/s Ratio Perm	0.55			c0.86				c0.17			0.08	0.04
v/c Ratio	0.81	0.77		1.26	0.80			0.77			0.34	0.18
Uniform Delay, d1	9.9	9.3		14.1	9.7			32.8			29.4	28.3
Progression Factor	2.55	2.91		0.72	0.66			1.00			1.00	1.00
Incremental Delay, d2	9.8	0.2		161.1	1.4			13.9			0.9	0.3
Delay (s)	35.1	27.3		171.3	7.9			46.7			30.3	28.6
Level of Service	D	C		F	A			D			C	C
Approach Delay (s)		27.5			14.6			46.7			29.7	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	22.3	HCM Level of Service	C
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↓
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (prot)	3167	1417	1583	3167	2998	
Flt Permitted	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (perm)	3167	1417	1583	3167	2998	
Volume (vph)	1360	849	95	1571	475	163
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1432	894	100	1654	500	172
RTOR Reduction (vph)	0	76	0	0	39	0
Lane Group Flow (vph)	1432	818	100	1654	633	0
Turn Type		pt+ov	Prot			
Protected Phases	2	2 4	1	6	4	
Permitted Phases						
Actuated Green, G (s)	40.6	73.9	9.0	37.1	29.4	
Effective Green, g (s)	40.5	73.5	8.5	37.0	29.0	
Actuated g/C Ratio	0.45	0.82	0.09	0.41	0.32	
Clearance Time (s)	3.9		3.5	3.9	3.6	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1425	1157	150	1302	966	
v/s Ratio Prot	c0.45	c0.58	c0.06	c0.52	0.21	
v/s Ratio Perm						
v/c Ratio	1.00	0.71	0.67	1.27	0.65	
Uniform Delay, d1	24.8	3.6	39.4	26.5	26.2	
Progression Factor	0.84	0.93	1.00	1.00	1.00	
Incremental Delay, d2	19.9	1.2	10.7	127.8	1.6	
Delay (s)	40.6	4.6	50.0	154.3	27.8	
Level of Service	D	A	D	F	C	
Approach Delay (s)	26.8			148.4	27.8	
Approach LOS	C			F	C	

Intersection Summary

HCM Average Control Delay	71.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.98		1.00	1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	3694		1304	3643		1302	2583		1304	2516	
Flt Permitted	0.13	1.00		0.13	1.00		0.13	1.00		0.15	1.00	
Satd. Flow (perm)	176	3694		176	3643		185	2583		205	2516	
Volume (vph)	122	1774	95	128	1536	106	210	1164	41	104	768	113
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	126	1829	98	132	1584	109	216	1200	42	107	792	116
RTOR Reduction (vph)	0	7	0	0	8	0	0	3	0	0	13	0
Lane Group Flow (vph)	126	1920	0	132	1685	0	216	1239	0	107	895	0
Conf. Peds. (#/hr)	105		77	77		105	97		104	104		97
Conf. Bikes (#/hr)			5			11			3			7
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt		pm+pt			
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	36.2	30.2		36.2	30.2		38.7	28.7		32.9	25.8	
Effective Green, g (s)	37.2	31.2		37.2	31.2		39.7	29.7		33.9	26.8	
Actuated g/C Ratio	0.41	0.35		0.41	0.35		0.44	0.33		0.38	0.30	
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	148	1281		148	1263		206	852		164	749	
v/s Ratio Prot	0.06	c0.52		c0.06	0.46		c0.12	c0.48		0.05	0.36	
v/s Ratio Perm	0.30			0.31			0.35			0.19		
v/c Ratio	0.85	1.50		0.89	1.33		1.05	1.45		0.65	1.20	
Uniform Delay, d1	21.6	29.4		22.6	29.4		22.5	30.1		23.0	31.6	
Progression Factor	1.28	0.96		1.42	0.75		1.26	1.32		1.00	1.00	
Incremental Delay, d2	15.8	226.2		30.3	153.5		43.8	206.1		9.0	100.8	
Delay (s)	43.5	254.5		62.5	175.5		72.1	245.9		32.0	132.4	
Level of Service	D	F		E	F		E	F		C	F	
Approach Delay (s)		241.6			167.4			220.1			121.8	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	196.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	126.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frbp, ped/bikes		0.98			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.98			0.99			0.99	
Flt Protected		1.00			0.99			1.00			1.00	
Satd. Flow (prot)		1549			1616			3132			3120	
Flt Permitted		0.94			0.74			0.78			0.78	
Satd. Flow (perm)		1468			1205			2454			2447	
Volume (vph)	31	239	158	47	226	36	45	1241	50	43	1204	67
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	35	272	180	53	257	41	51	1410	57	49	1368	76
RTOR Reduction (vph)	0	23	0	0	5	0	0	3	0	0	4	0
Lane Group Flow (vph)	0	464	0	0	346	0	0	1515	0	0	1489	0
Conf. Peds. (#/hr)	28		18	18		28	29		26	26		29
Conf. Bikes (#/hr)			4			2			1			6
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			55.6			55.6	
Effective Green, g (s)		26.0			26.0			56.0			56.0	
Actuated g/C Ratio		0.29			0.29			0.62			0.62	
Clearance Time (s)		4.0			4.0			4.4			4.4	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		424			348			1527			1523	
v/s Ratio Prot												
v/s Ratio Perm		0.32			0.29			0.62			0.61	
v/c Ratio		1.09			0.99			0.99			0.98	
Uniform Delay, d1		32.0			31.9			16.8			16.4	
Progression Factor		1.00			1.00			1.00			1.02	
Incremental Delay, d2		71.3			46.5			21.2			12.4	
Delay (s)		103.3			78.4			38.0			29.1	
Level of Service		F			E			D			C	
Approach Delay (s)		103.3			78.4			38.0			29.1	
Approach LOS		F			E			D			C	
Intersection Summary												
HCM Average Control Delay			46.5					HCM Level of Service			D	
HCM Volume to Capacity ratio			1.02									
Actuated Cycle Length (s)			90.0					Sum of lost time (s)			8.0	
Intersection Capacity Utilization			115.5%					ICU Level of Service			H	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑		↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0		4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00		0.91			0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85		0.99			1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	2608	1167		3692			2608	1167	1304	2604	
Flt Permitted	0.08	1.00	1.00		1.00			1.00	1.00	0.11	1.00	
Satd. Flow (perm)	111	2608	1167		3692			2608	1167	146	2604	
Volume (vph)	70	1361	193	0	1358	149	0	1206	213	196	955	10
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	71	1389	197	0	1386	152	0	1231	217	200	974	10
RTOR Reduction (vph)	0	0	41	0	11	0	0	0	8	0	1	0
Lane Group Flow (vph)	71	1389	156	0	1527	0	0	1231	209	200	983	0
Turn Type	Perm		Perm				Perm		Perm	Perm		
Protected Phases	4		8				2		2	6		
Permitted Phases	4		4				2		2	6		
Actuated Green, G (s)	53.0	53.0	53.0		53.0			57.0	57.0	57.0	57.0	
Effective Green, g (s)	54.0	54.0	54.0		54.0			58.0	58.0	58.0	58.0	
Actuated g/C Ratio	0.45	0.45	0.45		0.45			0.48	0.48	0.48	0.48	
Clearance Time (s)	5.0	5.0	5.0		5.0			5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	50	1174	525		1661			1261	564	71	1259	
v/s Ratio Prot		0.53			0.41			0.47			0.38	
v/s Ratio Perm	c0.64		0.13						0.18	c1.37		
v/c Ratio	1.42	1.18	0.30		0.92			0.98	0.37	2.82	0.78	
Uniform Delay, d1	33.0	33.0	21.0		31.0			30.3	19.5	31.0	25.7	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	273.2	91.3	1.4		9.7			20.3	1.9	855.2	4.9	
Delay (s)	306.2	124.3	22.4		40.7			50.6	21.4	886.2	30.6	
Level of Service	F	F	C		D			D	C	F	C	
Approach Delay (s)		120.0			40.7			46.2			175.1	
Approach LOS		F			D			D			F	

Intersection Summary

HCM Average Control Delay	91.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.15		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	132.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘↗	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	3072	4550	1417	1583	3167	1417	1583	3167	1417
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1583	4550	1417	3072	4550	1417	1583	3167	1417	1583	3167	1417
Volume (vph)	238	1690	580	229	1576	259	280	1581	269	81	948	128
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	248	1760	604	239	1642	270	292	1647	280	84	988	133
RTOR Reduction (vph)	0	0	16	0	0	149	0	0	56	0	0	5
Lane Group Flow (vph)	248	1760	588	239	1642	122	292	1647	224	84	988	128
Turn Type	Prot	pm+ov		Prot	Perm		Prot	pm+ov		Prot	pm+ov	
Protected Phases	3	8	1	7	4		1	6	7	5	2	3
Permitted Phases		8			4			6			2	
Actuated Green, G (s)	13.0	37.5	50.5	12.5	37.0	37.0	13.0	40.6	53.1	9.4	37.0	50.0
Effective Green, g (s)	13.0	39.5	52.5	12.5	39.0	39.0	13.0	42.6	55.1	9.4	39.0	52.0
Actuated g/C Ratio	0.11	0.33	0.44	0.10	0.32	0.32	0.11	0.36	0.46	0.08	0.32	0.43
Clearance Time (s)	4.0	6.0	4.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0
Vehicle Extension (s)	3.0	4.7	3.0	3.0	5.0	5.0	3.0	4.5	3.0	3.0	4.6	3.0
Lane Grp Cap (vph)	171	1498	667	320	1479	461	171	1124	698	124	1029	661
v/s Ratio Prot	c0.16	c0.39	0.10	0.08	0.36		c0.18	c0.52	0.03	0.05	0.31	0.02
v/s Ratio Perm			0.32			0.09			0.12			0.07
v/c Ratio	1.45	1.17	0.88	0.75	1.11	0.26	1.71	1.47	0.32	0.68	0.96	0.19
Uniform Delay, d1	53.5	40.2	30.9	52.2	40.5	29.9	53.5	38.7	20.6	53.8	39.7	21.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.18	0.75	0.35	1.00	1.00	1.00
Incremental Delay, d2	232.2	86.1	13.1	9.2	59.8	0.6	337.7	213.4	0.2	13.7	20.0	0.1
Delay (s)	285.7	126.3	44.0	61.4	100.3	30.5	401.1	242.6	7.5	67.5	59.7	21.2
Level of Service	F	F	D	E	F	C	F	F	A	E	E	C
Approach Delay (s)		122.4			87.2			233.8			56.0	
Approach LOS		F			F			F			E	

Intersection Summary

HCM Average Control Delay	133.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↘	↕		↘	↕		↘	↕	↘
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.97		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	3062		1583	3102		1583	4451		1583	3167	1417
Flt Permitted	0.10	1.00		0.07	1.00		0.12	1.00		0.12	1.00	1.00
Satd. Flow (perm)	160	3062		123	3102		196	4451		196	3167	1417
Volume (vph)	132	1404	399	187	1021	161	333	1066	181	198	1358	149
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	135	1433	407	191	1042	164	340	1088	185	202	1386	152
RTOR Reduction (vph)	0	22	0	0	10	0	0	20	0	0	0	29
Lane Group Flow (vph)	135	1818	0	191	1196	0	340	1253	0	202	1386	123
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		pm+ov
Protected Phases	1	6		5	2		3	8		7	4	1
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	61.4	53.0		61.6	53.1		41.5	33.0		41.5	33.0	41.4
Effective Green, g (s)	61.9	54.0		62.1	54.1		42.0	34.0		42.0	34.0	41.9
Actuated g/C Ratio	0.52	0.45		0.52	0.45		0.35	0.28		0.35	0.28	0.35
Clearance Time (s)	3.5	5.0		3.5	5.0		3.5	5.0		3.5	5.0	3.5
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	4.3		3.0	4.6	3.0
Lane Grp Cap (vph)	176	1378		161	1398		161	1261		161	897	542
v/s Ratio Prot	0.05	c0.59		c0.08	0.39		c0.14	0.28		0.08	0.44	0.01
v/s Ratio Perm	0.35			0.53			c0.60			0.36		0.07
v/c Ratio	0.77	1.32		1.19	0.86		2.11	0.99		1.25	1.55	0.23
Uniform Delay, d1	21.8	33.0		58.2	29.4		58.2	42.9		33.7	43.0	27.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.27	1.18	1.65
Incremental Delay, d2	17.9	148.9		129.8	6.9		520.7	23.7		133.5	247.6	0.1
Delay (s)	39.8	181.9		188.0	36.3		578.9	66.6		176.2	298.3	45.6
Level of Service	D	F		F	D		F	E		F	F	D
Approach Delay (s)		172.2			57.1			174.6			262.1	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	172.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	145.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.94			0.96	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.98	
Satd. Flow (prot)	1583	3162		1583	3153			1563			1576	
Flt Permitted	0.22	1.00		0.19	1.00			0.98			0.64	
Satd. Flow (perm)	361	3162		318	3153			1542			1034	
Volume (vph)	44	971	9	157	881	26	15	168	147	43	45	34
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	52	1142	11	185	1036	31	18	198	173	51	53	40
RTOR Reduction (vph)	0	1	0	0	2	0	0	35	0	0	17	0
Lane Group Flow (vph)	52	1152	0	185	1065	0	0	354	0	0	127	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		2		2		4		4		4	
Permitted Phases	2		2		4		4		4		4	
Actuated Green, G (s)	56.7	56.7		56.7	56.7			24.1			24.1	
Effective Green, g (s)	57.0	57.0		57.0	57.0			25.0			25.0	
Actuated g/C Ratio	0.63	0.63		0.63	0.63			0.28			0.28	
Clearance Time (s)	4.3	4.3		4.3	4.3			4.9			4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	229	2003		201	1997			428			287	
v/s Ratio Prot		0.36			0.34							
v/s Ratio Perm	0.14			c0.58				c0.23			0.12	
v/c Ratio	0.23	0.58		0.92	0.53			0.83			0.44	
Uniform Delay, d1	7.1	9.5		14.5	9.1			30.5			26.8	
Progression Factor	0.70	0.74		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.5	0.8		45.6	1.0			12.3			1.1	
Delay (s)	6.4	7.8		60.1	10.2			42.8			27.9	
Level of Service	A		E		B		D		D		C	
Approach Delay (s)	7.7		17.5		42.8		27.9		27.9		27.9	
Approach LOS	A		B		D		C		C		C	

Intersection Summary

HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑		↘	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	1.00	0.82	1.00	1.00	0.69	1.00	0.97		1.00	0.98	
Flpb, ped/bikes	0.96	1.00	1.00	0.99	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1522	3167	1162	1567	3167	977	1583	4337		1583	4435	
Flt Permitted	0.33	1.00	1.00	0.24	1.00	1.00	0.15	1.00		0.14	1.00	
Satd. Flow (perm)	531	3167	1162	394	3167	977	243	4337		233	4435	
Volume (vph)	216	713	66	187	562	134	46	1683	254	88	1548	113
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	223	735	68	193	579	138	47	1735	262	91	1596	116
RTOR Reduction (vph)	0	0	35	0	0	33	0	22	0	0	9	0
Lane Group Flow (vph)	223	735	33	193	579	105	47	1975	0	91	1703	0
Confl. Peds. (#/hr)	161		150	150		161	161		150	150		161
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	7	4	5	3	4	1	5	2		1	6	
Permitted Phases	4		4	4		4	2			6		
Actuated Green, G (s)	38.3	31.3	36.7	38.3	31.3	37.9	31.5	26.1		33.9	27.3	
Effective Green, g (s)	39.8	32.6	38.2	39.8	32.6	39.4	33.0	27.4		35.4	28.6	
Actuated g/C Ratio	0.44	0.36	0.42	0.44	0.36	0.44	0.37	0.30		0.39	0.32	
Clearance Time (s)	4.2	5.3	4.2	4.2	5.3	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	314	1147	545	268	1147	471	172	1320		194	1409	
v/s Ratio Prot	0.06	0.23	0.00	c0.06	0.18	0.02	0.02	c0.46		c0.04	0.38	
v/s Ratio Perm	0.26		0.02	c0.26		0.09	0.08			0.15		
v/c Ratio	0.71	0.64	0.06	0.72	0.50	0.22	0.27	1.50		0.47	1.21	
Uniform Delay, d1	18.0	23.8	15.3	17.1	22.4	15.8	22.8	31.3		22.1	30.7	
Progression Factor	1.42	0.28	0.00	1.89	1.62	2.49	1.17	1.29		1.00	1.00	
Incremental Delay, d2	2.0	0.3	0.0	7.9	0.3	0.2	0.4	225.3		1.8	100.8	
Delay (s)	27.7	7.1	0.0	40.2	36.6	39.4	27.1	265.8		23.9	131.5	
Level of Service	C	A	A	D	D	D	C	F		C	F	
Approach Delay (s)		11.1			37.8			260.3			126.1	
Approach LOS		B			D			F			F	

Intersection Summary

HCM Average Control Delay	139.2	HCM Level of Service	F
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↑↑↑		↗	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.98			0.92		1.00	1.00		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1598			1507		1583	4528		1583	4543	
Flt Permitted		0.88			0.88		0.09	1.00		0.09	1.00	
Satd. Flow (perm)		1441			1343		142	4528		142	4543	
Volume (vph)	7	7	3	131	17	211	6	1837	61	118	1752	17
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	8	8	3	146	19	234	7	2041	68	131	1947	19
RTOR Reduction (vph)	0	2	0	0	3	0	0	4	0	0	1	0
Lane Group Flow (vph)	0	17	0	0	396	0	7	2105	0	131	1965	0
Turn Type	Perm		Perm			Perm			Perm			
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		35.5			35.5		47.5	47.5		47.5	47.5	
Effective Green, g (s)		35.0			35.0		47.0	47.0		47.0	47.0	
Actuated g/C Ratio		0.39			0.39		0.52	0.52		0.52	0.52	
Clearance Time (s)		3.5			3.5		3.5	3.5		3.5	3.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		560			522		74	2365		74	2372	
v/s Ratio Prot								0.46			0.43	
v/s Ratio Perm		0.01			c0.29		0.05			c0.92		
v/c Ratio		0.03			0.76		0.09	0.89		1.77	0.83	
Uniform Delay, d1		17.0			23.8		10.8	19.2		21.5	18.1	
Progression Factor		1.00			1.00		0.51	0.90		0.81	0.80	
Incremental Delay, d2		0.1			9.9		0.2	0.5		362.7	1.1	
Delay (s)		17.1			33.8		5.7	17.9		380.1	15.6	
Level of Service		B			C		A	B		F	B	
Approach Delay (s)		17.1			33.8			17.8			38.3	
Approach LOS		B			C			B			D	

Intersection Summary

HCM Average Control Delay	28.5	HCM Level of Service	C
HCM Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶		↶	↶↶↶		↶	↶↶↶	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	1.00		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4517		1583	4545		1583	4481		1583	4472	
Flt Permitted	0.13	1.00		0.15	1.00		0.13	1.00		0.12	1.00	
Satd. Flow (perm)	222	4517		256	4545		215	4481		207	4472	
Volume (vph)	392	1932	98	147	1506	10	83	1580	177	118	1714	223
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	426	2100	107	160	1637	11	90	1717	192	128	1863	242
RTOR Reduction (vph)	0	6	0	0	1	0	0	15	0	0	18	0
Lane Group Flow (vph)	426	2201	0	160	1647	0	90	1894	0	128	2087	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	41.0	32.0		31.0	25.0		34.8	30.0		37.2	31.2	
Effective Green, g (s)	42.0	33.0		31.0	26.0		34.8	31.0		37.2	32.2	
Actuated g/C Ratio	0.47	0.37		0.34	0.29		0.39	0.34		0.41	0.36	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	285	1656		162	1313		141	1543		162	1600	
v/s Ratio Prot	c0.20	0.49		0.05	0.36		0.03	0.42		c0.04	c0.47	
v/s Ratio Perm	c0.50			0.29			0.22			0.28		
v/c Ratio	1.49	1.33		0.99	1.25		0.64	1.23		0.79	1.30	
Uniform Delay, d1	41.2	28.5		44.7	32.0		23.3	29.5		43.7	28.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.41	1.34	
Incremental Delay, d2	240.3	152.3		66.4	121.0		9.1	108.3		14.7	139.9	
Delay (s)	281.5	180.8		111.1	153.0		32.4	137.8		76.1	178.7	
Level of Service	F	F		F	F		C	F		E	F	
Approach Delay (s)		197.1			149.3			133.0			172.8	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	166.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	118.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3123		1583	3079		1583	4485		1583	4481	
Flt Permitted	0.11	1.00		0.11	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	182	3123		190	3079		185	4485		185	4481	
Volume (vph)	367	1234	125	100	1117	253	95	1625	172	129	1851	208
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	403	1356	137	110	1227	278	104	1786	189	142	2034	229
RTOR Reduction (vph)	0	8	0	0	2	0	0	14	0	0	15	0
Lane Group Flow (vph)	403	1485	0	110	1503	0	104	1961	0	142	2248	0
Turn Type	pm+pt		pm+pt		Perm		Perm		Perm		Perm	
Protected Phases	5	2		1	6			8				4
Permitted Phases	2			6			8				4	
Actuated Green, G (s)	43.8	35.8		40.4	34.1		35.2	35.2		35.2	35.2	
Effective Green, g (s)	43.7	36.7		40.3	35.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio	0.49	0.41		0.45	0.39		0.40	0.40		0.40	0.40	
Clearance Time (s)	3.0	4.9		3.0	4.9		4.8	4.8		4.8	4.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	197	1273		167	1197		74	1794		74	1792	
v/s Ratio Prot	c0.16	0.48		0.04	0.49			0.44			0.50	
v/s Ratio Perm	c0.83			0.26			0.56			c0.77		
v/c Ratio	2.05	1.17		0.66	1.26		1.41	1.09		1.92	1.25	
Uniform Delay, d1	43.7	26.6		21.6	27.5		27.0	27.0		27.0	27.0	
Progression Factor	1.55	1.06		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	481.4	80.5		9.0	121.8		245.2	51.4		459.2	119.3	
Delay (s)	549.0	108.7		30.6	149.3		272.2	78.4		486.2	146.3	
Level of Service	F	F		C	F		F	E		F	F	
Approach Delay (s)		202.3			141.3			88.1			166.3	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	149.5	HCM Level of Service	F
HCM Volume to Capacity ratio	2.03		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	133.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.93			0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99			0.98	
Satd. Flow (prot)	1583	3167	1417	1583	3167	1417		1537			1535	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.99			0.98	
Satd. Flow (perm)	1583	3167	1417	1583	3167	1417		1537			1535	
Volume (vph)	40	879	53	89	535	142	34	77	125	61	39	91
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	955	58	97	582	154	37	84	136	66	42	99
RTOR Reduction (vph)	0	0	42	0	0	107	0	45	0	0	37	0
Lane Group Flow (vph)	43	955	16	97	582	47	0	212	0	0	170	0
Turn Type	Prot		Perm	Prot		Perm	Split				Split	
Protected Phases	1	6		5	2		3	3			4	4
Permitted Phases			6			2						
Actuated Green, G (s)	5.4	24.7	24.7	7.9	27.2	27.2		21.0			21.0	
Effective Green, g (s)	4.4	24.9	24.9	6.9	27.4	27.4		21.6			20.6	
Actuated g/C Ratio	0.05	0.28	0.28	0.08	0.30	0.30		0.24			0.23	
Clearance Time (s)	3.0	4.2	4.2	3.0	4.2	4.2		4.6			3.6	
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0		3.0			3.0	
Lane Grp Cap (vph)	77	876	392	121	964	431		369			351	
v/s Ratio Prot	0.03	c0.30		c0.06	0.18			c0.14			c0.11	
v/s Ratio Perm			0.01			0.03						
v/c Ratio	0.56	1.09	0.04	0.80	0.60	0.11		0.57			0.48	
Uniform Delay, d1	41.9	32.5	23.8	40.9	26.7	22.5		30.2			30.1	
Progression Factor	1.47	0.69	0.28	1.07	1.69	4.46		1.00			1.00	
Incremental Delay, d2	3.0	47.8	0.1	27.0	2.4	0.4		6.4			4.7	
Delay (s)	64.5	70.2	6.8	70.9	47.4	100.9		36.5			34.8	
Level of Service	E	E	A	E	D	F		D			C	
Approach Delay (s)		66.5			60.0			36.5			34.8	
Approach LOS		E			E			D			C	

Intersection Summary

HCM Average Control Delay	58.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.95			0.96	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1571	3162		1583	3147			1562			1568	
Flt Permitted	0.14	1.00		0.08	1.00			0.98			0.82	
Satd. Flow (perm)	224	3162		139	3147			1541			1306	
Volume (vph)	199	1626	12	46	1328	29	8	91	59	34	83	47
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	221	1807	13	51	1476	32	9	101	66	38	92	52
RTOR Reduction (vph)	0	0	0	0	1	0	0	11	0	0	20	0
Lane Group Flow (vph)	221	1820	0	51	1507	0	0	165	0	0	162	0
Conf. Peds. (#/hr)	40		16	16		40	10		8	8		10
Conf. Bikes (#/hr)			15			9			2			5
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	66.5	66.5		66.5	66.5			14.4			14.4	
Effective Green, g (s)	67.0	67.0		67.0	67.0			15.0			15.0	
Actuated g/C Ratio	0.74	0.74		0.74	0.74			0.17			0.17	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.6			4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	167	2354		103	2343			257			218	
v/s Ratio Prot		0.58			0.48							
v/s Ratio Perm	c0.98			0.37				0.11			c0.12	
v/c Ratio	1.32	0.77		0.50	0.64			0.64			0.74	
Uniform Delay, d1	11.5	6.9		4.7	5.6			35.0			35.7	
Progression Factor	1.00	1.00		0.77	0.48			1.00			1.00	
Incremental Delay, d2	181.0	2.5		1.5	0.1			5.4			12.8	
Delay (s)	192.5	9.5		5.1	2.8			40.4			48.5	
Level of Service	F	A		A	A			D			D	
Approach Delay (s)		29.3			2.9			40.4			48.5	
Approach LOS		C			A			D			D	
Intersection Summary												
HCM Average Control Delay			20.3			HCM Level of Service					C	
HCM Volume to Capacity ratio			1.22									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			92.5%			ICU Level of Service					F	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.99		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2895		1490	2952		1490	2901		1490	2861	
Flt Permitted	0.20	1.00		0.17	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	318	2895		273	2952		157	2901		157	2861	
Volume (vph)	479	617	146	197	551	38	108	1188	256	32	1096	398
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	510	656	155	210	586	40	115	1264	272	34	1166	423
RTOR Reduction (vph)	0	23	0	0	5	0	0	21	0	0	41	0
Lane Group Flow (vph)	510	788	0	210	621	0	115	1515	0	34	1548	0
Turn Type	pm+pt		pm+pt		Perm		Perm					
Protected Phases	7	4		3	8			2				2
Permitted Phases	4			8			2			2		
Actuated Green, G (s)	39.5	23.5		36.5	22.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	39.5	24.5		36.5	23.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio	0.44	0.27		0.41	0.26		0.44	0.44		0.44	0.44	
Clearance Time (s)	3.0	5.0		3.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	5.1		3.0	4.1		5.7	5.7		5.7	5.7	
Lane Grp Cap (vph)	335	788		293	754		70	1289		70	1272	
v/s Ratio Prot	c0.25	0.27		0.11	0.21			0.52			0.54	
v/s Ratio Perm	c0.41			0.18			c0.73			0.22		
v/c Ratio	1.52	1.00		0.72	0.82		1.64	1.18		0.49	1.22	
Uniform Delay, d1	21.0	32.8		20.2	31.6		25.0	25.0		17.7	25.0	
Progression Factor	1.00	1.00		0.89	1.15		1.16	1.19		1.00	1.00	
Incremental Delay, d2	249.8	32.2		7.2	8.8		295.1	79.9		22.2	105.0	
Delay (s)	270.8	64.9		25.2	45.1		324.1	109.6		39.9	130.0	
Level of Service	F	E		C	D		F	F		D	F	
Approach Delay (s)		144.4			40.1			124.5			128.1	
Approach LOS		F			D			F			F	

Intersection Summary

HCM Average Control Delay	117.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	123.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑	↗	↖	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.91	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1490	4225		1490	4252		1490	2980	1333	1490	4228	
Flt Permitted	0.14	1.00		0.12	1.00		0.18	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	214	4225		188	4252		281	2980	1333	1490	4228	
Volume (vph)	25	1650	163	344	1203	60	72	1501	304	151	1156	106
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	27	1774	175	370	1294	65	77	1614	327	162	1243	114
RTOR Reduction (vph)	0	12	0	0	5	0	0	0	37	0	13	0
Lane Group Flow (vph)	27	1937	0	370	1354	0	77	1614	290	162	1344	0
Turn Type	pm+pt			pm+pt			Perm		pm+ov		Prot	
Protected Phases	3	8		7	4			2	7		1	6
Permitted Phases	8			4			2		2			
Actuated Green, G (s)	32.1	28.1		44.3	35.1		22.3	22.3	33.3	10.0	20.9	
Effective Green, g (s)	34.5	29.3		44.3	35.1		22.3	22.3	33.3	11.4	22.3	
Actuated g/C Ratio	0.38	0.33		0.49	0.39		0.25	0.25	0.37	0.13	0.25	
Clearance Time (s)	5.2	5.2		4.0	4.0		4.0	4.0	4.0	5.4	5.4	
Vehicle Extension (s)	3.0	3.0		3.5	3.0		3.0	3.0	3.5	3.0	3.0	
Lane Grp Cap (vph)	156	1375		252	1658		70	738	552	189	1048	
v/s Ratio Prot	0.01	0.46		c0.18	0.32			c0.54	0.06	c0.11	0.32	
v/s Ratio Perm	0.06			c0.54			0.27		0.15			
v/c Ratio	0.17	1.41		1.47	0.82		1.10	2.19	0.53	0.86	1.28	
Uniform Delay, d1	18.2	30.4		41.7	24.6		33.9	33.9	22.2	38.5	33.9	
Progression Factor	1.47	1.42		1.00	1.00		1.10	1.09	0.67	1.35	0.80	
Incremental Delay, d2	0.0	184.3		231.1	4.6		63.1	534.6	0.1	3.7	127.9	
Delay (s)	26.7	227.4		272.9	29.2		100.5	571.4	14.9	55.7	155.1	
Level of Service	C	F		F	C		F	F	B	E	F	
Approach Delay (s)		224.7			81.3			463.2			144.5	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	240.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	137.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	0.99		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	2967		1509	1580		1509	4324		1509	4268	
Flt Permitted	0.21	1.00		0.21	1.00		0.22	1.00		0.22	1.00	
Satd. Flow (perm)	334	2967		334	1580		353	4324		353	4268	
Volume (vph)	154	952	119	125	936	34	144	1702	32	74	1525	179
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	166	1024	128	134	1006	37	155	1830	34	80	1640	192
RTOR Reduction (vph)	0	2	0	0	1	0	0	4	0	0	26	0
Lane Group Flow (vph)	166	1150	0	134	1042	0	155	1860	0	80	1806	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		4		4		2		2		2	
Permitted Phases	4		4		4		2		2		2	
Actuated Green, G (s)	19.0	19.0		19.0	19.0		18.0	18.0		18.0	18.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		18.0	18.0		18.0	18.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.40	0.40		0.40	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	141	1253		141	667		141	1730		141	1707	
v/s Ratio Prot		0.39			c0.66			0.43			0.42	
v/s Ratio Perm	0.50			0.40			c0.44			0.23		
v/c Ratio	1.18	0.92		0.95	1.56		1.10	1.08		0.57	1.06	
Uniform Delay, d1	13.0	12.3		12.5	13.0		13.5	13.5		10.5	13.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.87	0.89	
Incremental Delay, d2	131.3	10.6		60.6	260.2		104.9	45.0		1.5	27.6	
Delay (s)	144.3	22.9		73.1	273.2		118.4	58.5		10.6	39.6	
Level of Service	F	C		E	F		F	E		B	D	
Approach Delay (s)		38.2			250.4			63.1			38.4	
Approach LOS		D			F			E			D	

Intersection Summary

HCM Average Control Delay	84.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	132.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.98		1.00	0.98		1.00	0.98		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	2939		1509	2941		1509	4128		1509	4164	
Flt Permitted	0.09	1.00		0.09	1.00		0.14	1.00		0.13	1.00	
Satd. Flow (perm)	140	2939		140	2941		215	4128		213	4164	
Volume (vph)	207	1354	97	189	1135	79	85	1713	329	100	1533	128
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	218	1425	102	199	1195	83	89	1803	346	105	1614	135
RTOR Reduction (vph)	0	5	0	0	5	0	0	28	0	0	9	0
Lane Group Flow (vph)	218	1522	0	199	1273	0	89	2121	0	105	1740	0
Conf. Peds. (#/hr)	161		159	159		161	383		91	91		383
Conf. Bikes (#/hr)			19			25			10			23
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	51.4	45.4		51.4	45.4		34.4	29.6		34.8	29.8	
Effective Green, g (s)	50.4	45.4		50.4	45.4		33.4	29.6		33.8	29.8	
Actuated g/C Ratio	0.50	0.45		0.50	0.45		0.33	0.30		0.34	0.30	
Clearance Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	1.0	0.2		1.0	0.2		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	139	1334		139	1335		121	1222		124	1241	
v/s Ratio Prot	c0.08	0.52		0.07	0.43		0.03	c0.51		c0.03	0.42	
v/s Ratio Perm	c0.71			0.65			0.22			0.25		
v/c Ratio	1.57	1.14		1.43	0.95		0.74	1.74		0.85	1.40	
Uniform Delay, d1	20.2	27.3		22.8	26.3		29.7	35.2		31.7	35.1	
Progression Factor	1.95	0.51		1.00	1.00		1.02	0.83		1.00	1.00	
Incremental Delay, d2	258.9	64.2		230.4	15.8		1.8	331.3		37.1	185.8	
Delay (s)	298.2	78.3		253.2	42.1		32.1	360.4		68.8	220.9	
Level of Service	F	E		F	D		C	F		E	F	
Approach Delay (s)		105.7			70.5			347.4			212.3	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	199.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	128.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↔		↖	↗		↖	↗	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.98			0.99		1.00	1.00		1.00	0.97	
Flpb, ped/bikes	0.97	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90			0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1464	1402			1518		1509	2988		1509	2896	
Flt Permitted	0.56	1.00			0.54		0.06	1.00		0.07	1.00	
Satd. Flow (perm)	860	1402			827		102	2988		108	2896	
Volume (vph)	101	100	186	61	92	22	226	1981	93	22	1577	176
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	106	105	196	64	97	23	238	2085	98	23	1660	185
RTOR Reduction (vph)	0	74	0	0	5	0	0	3	0	0	7	0
Lane Group Flow (vph)	106	227	0	0	179	0	238	2180	0	23	1838	0
Conf. Peds. (#/hr)	33		13	13			33	97		20	20	97
Conf. Bikes (#/hr)			3				4			6		22
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	24.2	24.2			24.2		67.8	62.4		61.2	58.8	
Effective Green, g (s)	24.2	24.2			24.2		67.4	62.4		60.2	58.8	
Actuated g/C Ratio	0.24	0.24			0.24		0.67	0.62		0.60	0.59	
Clearance Time (s)	4.0	4.0			4.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	5.0	5.0			5.0		1.0	0.2		1.0	0.2	
Lane Grp Cap (vph)	208	339			200		139	1865		85	1703	
v/s Ratio Prot		0.16					c0.09	0.73		0.00	0.63	
v/s Ratio Perm	0.12				c0.22		c1.07			0.16		
v/c Ratio	0.51	0.67			0.89		1.71	1.17		0.27	1.08	
Uniform Delay, d1	32.8	34.3			36.7		28.1	18.8		25.3	20.6	
Progression Factor	1.00	1.00			1.00		1.00	1.00		2.17	1.73	
Incremental Delay, d2	4.1	6.7			37.6		349.1	82.3		0.1	36.8	
Delay (s)	36.8	41.0			74.2		377.2	101.1		54.9	72.4	
Level of Service	D	D			E		F	F		D	E	
Approach Delay (s)		39.9			74.2			128.2			72.2	
Approach LOS		D			E			F			E	

Intersection Summary

HCM Average Control Delay	97.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	123.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕↕↕		↗	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.98			0.97		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1526			1516		1490	4250		1490	4273	
Flt Permitted		0.82			0.76		0.08	1.00		0.08	1.00	
Satd. Flow (perm)		1265			1157		123	4250		123	4273	
Volume (vph)	76	373	80	65	260	78	60	2283	121	114	1893	27
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	80	393	84	68	274	82	63	2403	127	120	1993	28
RTOR Reduction (vph)	0	6	0	0	2	0	0	7	0	0	2	0
Lane Group Flow (vph)	0	551	0	0	422	0	63	2524	0	120	2019	0
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		30.0			30.0		50.6	50.6		50.6	50.6	
Effective Green, g (s)		31.0			31.0		51.0	51.0		51.0	51.0	
Actuated g/C Ratio		0.34			0.34		0.57	0.57		0.57	0.57	
Clearance Time (s)		5.0			5.0		4.4	4.4		4.4	4.4	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		436			399		70	2408		70	2421	
v/s Ratio Prot								0.59			0.47	
v/s Ratio Perm		c0.44			0.36		0.51			c0.98		
v/c Ratio		1.26			1.06		0.90	1.05		1.71	0.83	
Uniform Delay, d1		29.5			29.5		17.2	19.5		19.5	16.0	
Progression Factor		1.00			1.00		0.41	0.46		1.00	1.00	
Incremental Delay, d2		136.1			61.1		15.5	23.0		374.4	3.6	
Delay (s)		165.6			90.6		22.5	31.9		393.9	19.6	
Level of Service		F			F		C	C		F	B	
Approach Delay (s)		165.6			90.6			31.7			40.6	
Approach LOS		F			F			C			D	

Intersection Summary

HCM Average Control Delay	52.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	118.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕		↔	↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2946		1490	2957		1490	4212		1490	4229	
Flt Permitted	0.22	1.00		0.12	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	347	2946		185	2957		157	4212		157	4229	
Volume (vph)	128	1200	101	177	943	52	10	2227	273	41	1916	174
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	136	1277	107	188	1003	55	11	2369	290	44	2038	185
RTOR Reduction (vph)	0	7	0	0	1	0	0	17	0	0	12	0
Lane Group Flow (vph)	136	1377	0	188	1057	0	11	2642	0	44	2211	0
Turn Type	Perm		pm+pt		Perm		Perm		Perm			
Protected Phases	8		7		4		6		6		2	
Permitted Phases	8		4		6		6		6		2	
Actuated Green, G (s)	28.6	28.6		40.6	40.6		38.6	38.6		38.6	38.6	
Effective Green, g (s)	30.0	30.0		42.0	42.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio	0.33	0.33		0.47	0.47		0.44	0.44		0.44	0.44	
Clearance Time (s)	5.4	5.4		3.5	5.4		5.4	5.4		5.4	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	116	982		202	1380		70	1872		70	1880	
v/s Ratio Prot	c0.47		c0.08		0.36		c0.63				0.52	
v/s Ratio Perm	0.39		0.35				0.07				0.28	
v/c Ratio	1.17	1.40		0.93	0.77		0.16	1.41		0.63	1.18	
Uniform Delay, d1	30.0	30.0		42.7	19.9		14.9	25.0		19.3	25.0	
Progression Factor	0.65	0.68		1.00	1.00		0.17	0.33		1.39	1.42	
Incremental Delay, d2	86.1	181.7		44.0	4.1		0.4	185.3		21.5	82.7	
Delay (s)	105.8	202.0		86.8	24.0		2.9	193.7		48.3	118.2	
Level of Service	F		F		C		A		F		D	
Approach Delay (s)	193.4				33.5		192.9				116.9	
Approach LOS	F				C		F				F	

Intersection Summary

HCM Average Control Delay	144.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	123.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↗		↕	↗
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frbp, ped/bikes	1.00	0.98		1.00	1.00			1.00	0.93		0.97	
Flpb, ped/bikes	0.98	1.00		1.00	1.00			0.97	1.00		0.99	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.99	
Satd. Flow (prot)	1481	2915		1509	3003			1479	1255		1438	
Flt Permitted	0.18	1.00		0.06	1.00			0.63	1.00		0.91	
Satd. Flow (perm)	285	2915		100	3003			963	1255		1322	
Volume (vph)	48	1536	137	128	1175	19	139	34	132	26	48	46
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	1707	152	142	1306	21	154	38	147	29	53	51
RTOR Reduction (vph)	0	6	0	0	1	0	0	0	92	0	25	0
Lane Group Flow (vph)	53	1853	0	142	1326	0	0	192	55	0	108	0
Confl. Peds. (#/hr)	50		85	85		50	37		38	38		37
Confl. Bikes (#/hr)			12			7			3			3
Turn Type	Perm			pm+pt			Perm		Perm	Perm		
Protected Phases		2		1	6			8				4
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	59.6	59.6		68.6	68.6			23.4	23.4		23.4	
Effective Green, g (s)	59.6	59.6		68.6	68.6			23.4	23.4		23.4	
Actuated g/C Ratio	0.60	0.60		0.69	0.69			0.23	0.23		0.23	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	0.2	0.2		1.0	0.2			4.0	4.0		3.0	
Lane Grp Cap (vph)	170	1737		139	2060			225	294		309	
v/s Ratio Prot		c0.64		c0.05	0.44							
v/s Ratio Perm	0.19			0.65			c0.20	0.04			0.08	
v/c Ratio	0.31	1.07		1.02	0.64		0.85	0.19			0.35	
Uniform Delay, d1	10.0	20.2		28.5	8.8		36.7	30.7			32.0	
Progression Factor	0.79	1.07		1.89	1.39		1.00	1.00			1.00	
Incremental Delay, d2	4.2	40.9		50.9	0.6		26.3	0.4			0.7	
Delay (s)	12.1	62.5		104.8	12.8		63.0	31.1			32.7	
Level of Service	B	E		F	B		E	C			C	
Approach Delay (s)		61.1		21.7			49.1				32.7	
Approach LOS		E		C			D				C	

Intersection Summary

HCM Average Control Delay	44.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑	↑↑		↵	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	0.99		0.89	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1509	3018	2993		1405	
Flt Permitted	0.16	1.00	1.00		0.99	
Satd. Flow (perm)	255	3018	2993		1405	
Volume (vph)	90	1456	1317	76	26	94
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	93	1501	1358	78	27	97
RTOR Reduction (vph)	0	0	3	0	76	0
Lane Group Flow (vph)	93	1501	1433	0	48	0
Turn Type	Perm					
Protected Phases		2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	80.4	80.4	80.4		11.6	
Effective Green, g (s)	79.9	79.9	79.9		12.1	
Actuated g/C Ratio	0.80	0.80	0.80		0.12	
Clearance Time (s)	3.5	3.5	3.5		4.5	
Vehicle Extension (s)	0.2	0.2	0.2		3.0	
Lane Grp Cap (vph)	204	2411	2391		170	
v/s Ratio Prot		c0.50	0.48		c0.03	
v/s Ratio Perm	0.36					
v/c Ratio	0.46	0.62	0.60		0.28	
Uniform Delay, d1	3.2	4.0	3.9		40.0	
Progression Factor	0.47	0.28	1.55		1.00	
Incremental Delay, d2	5.5	0.9	0.8		0.9	
Delay (s)	7.0	2.0	6.9		40.9	
Level of Service	A	A	A		D	
Approach Delay (s)		2.3	6.9		40.9	
Approach LOS		A	A		D	

Intersection Summary

HCM Average Control Delay	5.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕	↖	↖	↕↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4501		1583	4502		1583	3167	1417	1583	3167	1417
Flt Permitted	0.11	1.00		0.11	1.00		0.14	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	190	4501		175	4502		240	3167	1417	222	3167	1417
Volume (vph)	326	1748	137	258	1156	88	153	1266	279	117	815	316
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	351	1880	147	277	1243	95	165	1361	300	126	876	340
RTOR Reduction (vph)	0	10	0	0	10	0	0	0	1	0	0	177
Lane Group Flow (vph)	351	2017	0	277	1328	0	165	1361	299	126	876	163
Turn Type	pm+pt			pm+pt			Perm	pm+ov	Perm		Perm	
Protected Phases	1	6		5	2		8	8	5		4	
Permitted Phases	6			2			8	8	4		4	4
Actuated Green, G (s)	48.0	37.0		48.0	37.0		28.1	28.1	39.1	28.1	28.1	28.1
Effective Green, g (s)	48.0	38.0		48.0	38.0		30.0	30.0	40.0	30.0	30.0	30.0
Actuated g/C Ratio	0.53	0.42		0.53	0.42		0.33	0.33	0.44	0.33	0.33	0.33
Clearance Time (s)	3.0	5.0		3.0	5.0		5.9	5.9	3.0	5.9	5.9	5.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	256	1900		250	1901		80	1056	693	74	1056	472
v/s Ratio Prot	c0.15	0.45		0.12	0.30			0.43	0.05		0.28	
v/s Ratio Perm	c0.58			0.47			c0.69		0.16	0.57		0.12
v/c Ratio	1.37	1.06		1.11	0.70		2.06	1.29	0.43	1.70	0.83	0.35
Uniform Delay, d1	21.7	26.0		25.3	21.3		30.0	30.0	17.2	30.0	27.6	22.6
Progression Factor	1.00	1.00		1.57	1.16		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	189.8	39.3		76.4	1.3		518.4	137.2	0.4	367.0	7.6	2.0
Delay (s)	211.5	65.3		116.1	26.1		548.4	167.2	17.6	397.0	35.2	24.6
Level of Service	F	E		F	C		F	F	B	F	D	C
Approach Delay (s)		86.9			41.5			177.1			66.5	
Approach LOS		F			D			F			E	

Intersection Summary

HCM Average Control Delay	95.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	117.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Fr _t	1.00	0.99		1.00	0.99		1.00	0.98		1.00	0.98	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	2999		1509	2979		1509	2972		1509	2965	
Fl _t Permitted	0.20	1.00		0.12	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	320	2999		195	2979		176	2972		176	2965	
Volume (vph)	289	1193	51	180	902	85	66	1315	149	43	1000	131
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	304	1256	54	189	949	89	69	1384	157	45	1053	138
RTOR Reduction (vph)	0	3	0	0	2	0	0	9	0	0	10	0
Lane Group Flow (vph)	304	1307	0	189	1036	0	69	1532	0	45	1181	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	6			2			4			8		
Permitted Phases	6			2			4			8		
Actuated Green, G (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	56.0	56.0		56.0	56.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.36	0.36		0.36	0.36	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	4.9	4.9		4.9	4.9		4.9	4.9		4.9	4.9	
Lane Grp Cap (vph)	179	1679		109	1668		63	1070		63	1067	
v/s Ratio Prot		0.44			0.35			c0.52			0.40	
v/s Ratio Perm	0.95			c0.97			0.39			0.26		
v/c Ratio	1.70	0.78		1.73	0.62		1.10	1.43		0.71	1.11	
Uniform Delay, d ₁	22.0	17.2		22.0	14.8		32.0	32.0		27.6	32.0	
Progression Factor	1.00	1.00		1.00	1.00		0.99	0.95		1.00	1.00	
Incremental Delay, d ₂	337.0	3.6		365.5	1.8		114.9	197.5		51.1	61.6	
Delay (s)	359.0	20.8		387.5	16.6		146.5	228.1		78.7	93.6	
Level of Service	F	C		F	B		F	F		E	F	
Approach Delay (s)		84.5			73.7			224.6			93.1	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	123.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	122.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frbp, ped/bikes	0.95		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.91		1.00	1.00	1.00	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1348		1509	3018	2988	
Flt Permitted	0.98		0.17	1.00	1.00	
Satd. Flow (perm)	1348		278	3018	2988	
Volume (vph)	77	135	214	1555	1156	28
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	82	144	228	1654	1230	30
RTOR Reduction (vph)	59	0	0	0	2	0
Lane Group Flow (vph)	167	0	228	1654	1258	0
Conf. Peds. (#/hr)		58	70			70
Conf. Bikes (#/hr)						3
Turn Type			Perm			
Protected Phases	4			2	2	
Permitted Phases			2			
Actuated Green, G (s)	23.4		69.0	69.0	69.0	
Effective Green, g (s)	23.4		68.6	68.6	68.6	
Actuated g/C Ratio	0.23		0.69	0.69	0.69	
Clearance Time (s)	4.0		3.6	3.6	3.6	
Vehicle Extension (s)	3.0		0.2	0.2	0.2	
Lane Grp Cap (vph)	315		191	2070	2050	
v/s Ratio Prot	c0.12			0.55	0.42	
v/s Ratio Perm			c0.82			
v/c Ratio	0.53		1.19	0.80	0.61	
Uniform Delay, d1	33.5		15.7	10.9	8.5	
Progression Factor	1.00		0.95	0.53	1.68	
Incremental Delay, d2	6.3		92.1	0.3	0.1	
Delay (s)	39.8		107.0	6.1	14.4	
Level of Service	D		F	A	B	
Approach Delay (s)	39.8			18.3	14.4	
Approach LOS	D			B	B	
Intersection Summary						
HCM Average Control Delay			18.3		HCM Level of Service	B
HCM Volume to Capacity ratio			1.03			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			81.7%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖		↕	↖
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00		0.91	0.91
Frbp, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00	0.77		1.00	0.69
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1509	2906		1509	2948		1509	3018	1041		2879	844
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.51	1.00
Satd. Flow (perm)	1509	2906		1509	2948		1509	3018	1041		1487	844
Volume (vph)	332	1166	155	216	1035	61	153	1302	242	92	1102	86
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	349	1227	163	227	1089	64	161	1371	255	97	1160	91
RTOR Reduction (vph)	0	1	0	0	4	0	0	0	91	0	0	52
Lane Group Flow (vph)	349	1390	0	227	1149	0	161	1371	164	0	1257	39
Conf. Peds. (#/hr)	216		151	151		216	215		146	146		215
Conf. Bikes (#/hr)			11			9			6			6
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases								8				4
Actuated Green, G (s)	13.0	50.0		4.5	41.5		6.0	34.5	34.5		25.5	25.5
Effective Green, g (s)	12.0	50.0		3.5	41.5		5.0	34.5	34.5		25.5	25.5
Actuated g/C Ratio	0.12	0.50		0.04	0.42		0.05	0.34	0.34		0.26	0.26
Clearance Time (s)	3.0	4.0		3.0	4.0		3.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	1.0	0.2		1.0	0.2		1.0	5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	181	1453		53	1223		75	1041	359		379	215
v/s Ratio Prot	c0.23	c0.48		c0.15	0.39		c0.11	0.45				
v/s Ratio Perm									0.16		c0.85	0.05
v/c Ratio	1.93	0.96		4.28	0.94		2.15	1.32	0.46		3.32	0.18
Uniform Delay, d1	44.0	24.0		48.2	28.0		47.5	32.8	25.5		37.2	29.1
Progression Factor	1.10	0.62		1.06	0.81		1.00	1.00	1.00		0.92	0.90
Incremental Delay, d2	425.9	7.9		1512.9	12.8		557.6	149.5	4.1		1047.8	1.5
Delay (s)	474.3	22.8		1564.1	35.5		605.1	182.3	29.6		1082.0	27.8
Level of Service	F	C		F	D		F	F	C		F	C
Approach Delay (s)		113.4			286.9			198.6			1010.8	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	369.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	154.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑↑↑		↕	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.99			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1641			1535		1583	4529		1583	4509	
Flt Permitted		0.89			0.84		0.11	1.00		0.09	1.00	
Satd. Flow (perm)		1464			1303		182	4529		149	4509	
Volume (vph)	52	369	34	58	139	231	95	1502	48	48	1348	86
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	55	393	36	62	148	246	101	1598	51	51	1434	91
RTOR Reduction (vph)	0	4	0	0	4	0	0	3	0	0	7	0
Lane Group Flow (vph)	0	480	0	0	452	0	101	1646	0	51	1518	0
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		32.4			32.4		47.8	47.8		47.8	47.8	
Effective Green, g (s)		33.8			33.8		48.2	48.2		48.2	48.2	
Actuated g/C Ratio		0.38			0.38		0.54	0.54		0.54	0.54	
Clearance Time (s)		5.4			5.4		4.4	4.4		4.4	4.4	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		550			489		97	2426		80	2415	
v/s Ratio Prot								0.36			0.34	
v/s Ratio Perm		0.33			c0.35		c0.55			0.34		
v/c Ratio		0.87			0.92		1.04	0.68		0.64	0.63	
Uniform Delay, d1		26.1			26.9		20.9	15.2		14.7	14.6	
Progression Factor		1.00			1.00		1.53	1.61		1.00	1.00	
Incremental Delay, d2		14.3			23.2		65.3	0.5		32.9	1.3	
Delay (s)		40.4			50.0		97.2	25.1		47.7	15.9	
Level of Service		D			D		F	C		D	B	
Approach Delay (s)		40.4			50.0			29.2			16.9	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM Average Control Delay	28.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3121		1583	3091		1583	4467		1583	4482	
Flt Permitted	0.29	1.00		0.10	1.00		0.12	1.00		0.12	1.00	
Satd. Flow (perm)	481	3121		159	3091		196	4467		196	4482	
Volume (vph)	245	1235	131	204	774	147	75	1356	188	153	1112	123
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	250	1260	134	208	790	150	77	1384	192	156	1135	126
RTOR Reduction (vph)	0	9	0	0	3	0	0	20	0	0	15	0
Lane Group Flow (vph)	250	1385	0	208	937	0	77	1556	0	156	1246	0
Turn Type	Perm		pm+pt			Perm			Perm			
Protected Phases	8		7			4			6			2
Permitted Phases	8		4			6			2			
Actuated Green, G (s)	36.7	36.7		46.7	46.7		33.1	33.1		33.1	33.1	
Effective Green, g (s)	38.0	38.0		48.0	48.0		34.0	34.0		34.0	34.0	
Actuated g/C Ratio	0.42	0.42		0.53	0.53		0.38	0.38		0.38	0.38	
Clearance Time (s)	5.3	5.3		3.5	5.3		4.9	4.9		4.9	4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	203	1318		180	1649		74	1688		74	1693	
v/s Ratio Prot		0.44		c0.08	0.30			0.35			0.28	
v/s Ratio Perm	0.52			c0.54			0.39			c0.80		
v/c Ratio	1.23	1.05		1.16	0.57		1.04	0.92		2.11	0.74	
Uniform Delay, d1	26.0	26.0		22.2	14.1		28.0	26.7		28.0	24.1	
Progression Factor	1.00	1.00		0.88	0.75		0.58	0.56		1.01	1.09	
Incremental Delay, d2	139.4	39.4		98.4	0.8		42.4	1.1		531.7	2.2	
Delay (s)	165.4	65.4		118.0	11.4		58.6	16.0		560.1	28.6	
Level of Service	F	E		F	B		E	B		F	C	
Approach Delay (s)		80.6			30.7			18.0			87.1	
Approach LOS		F			C			B			F	

Intersection Summary

HCM Average Control Delay	54.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	112.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↖		↕		↖	↕	↖
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		0.95		1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00		0.95	1.00	1.00
Satd. Flow (prot)	1509	3011		1509	3018	1350		2981		1509	3018	1350
Flt Permitted	0.09	1.00		0.10	1.00	1.00		0.95		0.13	1.00	1.00
Satd. Flow (perm)	143	3011		159	3018	1350		2829		205	3018	1350
Volume (vph)	286	1444	23	20	1102	83	10	1174	100	77	687	250
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	298	1504	24	21	1148	86	10	1223	104	80	716	260
RTOR Reduction (vph)	0	1	0	0	0	27	0	6	0	0	0	179
Lane Group Flow (vph)	298	1527	0	21	1148	59	0	1331	0	80	716	81
Turn Type	pm+pt			pm+pt			Perm	Perm		Perm		Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	61.0	56.3		43.7	42.0	42.0		31.0		31.0	31.0	31.0
Effective Green, g (s)	61.0	56.3		42.7	42.0	42.0		31.0		31.0	31.0	31.0
Actuated g/C Ratio	0.61	0.56		0.43	0.42	0.42		0.31		0.31	0.31	0.31
Clearance Time (s)	3.0	4.0		3.0	4.0	4.0		4.0		4.0	4.0	4.0
Vehicle Extension (s)	1.0	3.0		1.0	3.0	3.0		3.5		3.5	3.5	3.5
Lane Grp Cap (vph)	292	1695		77	1268	567		877		64	936	419
v/s Ratio Prot	c0.15	0.51		0.00	0.38						0.24	
v/s Ratio Perm	c0.47			0.11		0.04		c0.47		0.39		0.06
v/c Ratio	1.02	0.90		0.27	0.91	0.10		1.52		1.25	0.76	0.19
Uniform Delay, d1	30.2	19.4		19.7	27.1	17.6		34.5		34.5	31.2	25.3
Progression Factor	1.00	1.00		0.77	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	58.0	8.2		0.1	1.2	0.0		238.7		194.0	5.9	1.0
Delay (s)	88.2	27.5		15.2	28.4	17.6		273.2		228.5	37.1	26.3
Level of Service	F	C		B	C	B		F		F	D	C
Approach Delay (s)		37.4			27.4			273.2			49.0	
Approach LOS		D			C			F			D	

Intersection Summary

HCM Average Control Delay	95.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	132.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1583	3164		1583	3153			1614			1620	
Flt Permitted	0.14	1.00		0.13	1.00			0.99			0.86	
Satd. Flow (perm)	242	3164		222	3153			1598			1409	
Volume (vph)	172	1813	10	48	1102	32	13	409	124	41	207	46
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	179	1889	10	50	1148	33	14	426	129	43	216	48
RTOR Reduction (vph)	0	1	0	0	4	0	0	4	0	0	11	0
Lane Group Flow (vph)	179	1899	0	50	1178	0	0	565	0	0	296	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	6		2		2		8		8		4	
Permitted Phases	6		2		2		8		8		4	
Actuated Green, G (s)	29.7	29.7		29.7	29.7			21.1			21.1	
Effective Green, g (s)	30.0	30.0		30.0	30.0			22.0			22.0	
Actuated g/C Ratio	0.50	0.50		0.50	0.50			0.37			0.37	
Clearance Time (s)	4.3	4.3		4.3	4.3			4.9			4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	121	1582		111	1577			586			517	
v/s Ratio Prot		0.60			0.37							
v/s Ratio Perm	c0.74			0.23				c0.35			0.21	
v/c Ratio	1.48	1.20		0.45	0.75			0.96			0.57	
Uniform Delay, d1	15.0	15.0		9.7	12.0			18.6			15.2	
Progression Factor	2.10	2.18		1.00	1.00			1.00			1.00	
Incremental Delay, d2	219.8	90.6		12.6	3.3			28.2			1.5	
Delay (s)	251.2	123.3		22.3	15.2			46.8			16.8	
Level of Service	F	F		C	B			D			B	
Approach Delay (s)		134.3			15.5			46.8			16.8	
Approach LOS		F			B			D			B	

Intersection Summary

HCM Average Control Delay	78.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↑	↑		↑↓		↑	↑↓	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)		4.0			4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95	1.00		1.00		0.95	0.95	
Frt		1.00			1.00	0.85		0.96		1.00	0.99	
Flt Protected		1.00			1.00	1.00		0.99		0.95	0.97	
Satd. Flow (prot)		3014			3018	1350		1499		1433	1440	
Flt Permitted		1.00			1.00	1.00		0.99		0.95	0.97	
Satd. Flow (perm)		3014			3018	1350		1499		1433	1440	
Volume (vph)	0	1833	16	0	1254	475	12	18	15	462	59	22
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1890	16	0	1293	490	12	19	15	476	61	23
RTOR Reduction (vph)	0	0	0	0	0	82	0	14	0	0	3	0
Lane Group Flow (vph)	0	1906	0	0	1293	408	0	32	0	277	280	0
Turn Type					pm+ov		Split			Split		
Protected Phases		2			6	4	3	3		4	4	
Permitted Phases						6						
Actuated Green, G (s)		61.9			61.9	83.3		4.7		21.4	21.4	
Effective Green, g (s)		61.9			61.9	83.3		4.7		21.4	21.4	
Actuated g/C Ratio		0.62			0.62	0.83		0.05		0.21	0.21	
Clearance Time (s)		4.0			4.0	4.0		4.0		4.0	4.0	
Vehicle Extension (s)		4.5			4.5	4.0		3.0		4.0	4.0	
Lane Grp Cap (vph)		1866			1868	1179		70		307	308	
v/s Ratio Prot		c0.63			0.43	0.07		c0.02		0.19	c0.19	
v/s Ratio Perm						0.23						
v/c Ratio		1.02			0.69	0.35		0.45		0.90	0.91	
Uniform Delay, d1		19.1			12.7	2.0		46.4		38.3	38.3	
Progression Factor		0.99			1.00	1.00		1.00		1.27	1.27	
Incremental Delay, d2		12.7			2.1	0.2		4.6		18.2	18.9	
Delay (s)		31.6			14.8	2.2		51.0		66.7	67.7	
Level of Service		C			B	A		D		E	E	
Approach Delay (s)		31.6			11.4			51.0			67.2	
Approach LOS		C			B			D			E	

Intersection Summary

HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↖		↕	↖
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (prot)	1509	2978		1509	3004			1533	1350		1480	
Flt Permitted	0.17	1.00		0.09	1.00			0.97	1.00		0.99	
Satd. Flow (perm)	268	2978		136	3004			1533	1350		1480	
Volume (vph)	16	1647	157	480	1058	32	194	75	660	25	63	72
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	17	1752	167	511	1126	34	206	80	702	27	67	77
RTOR Reduction (vph)	0	6	0	0	1	0	0	0	286	0	30	0
Lane Group Flow (vph)	17	1913	0	511	1159	0	0	286	416	0	141	0
Turn Type	Perm		pm+pt			Split		pm+ov		Split		
Protected Phases	6		5 7			4		4 5 7		8 8		
Permitted Phases	6		2					4				
Actuated Green, G (s)	42.8	42.8		54.8	50.8			18.0	27.0		4.0	
Effective Green, g (s)	42.8	42.8		54.8	50.8			18.0	26.0		4.0	
Actuated g/C Ratio	0.43	0.43		0.55	0.51			0.18	0.26		0.04	
Clearance Time (s)	4.0	4.0			4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0			3.0			4.0			3.0	
Lane Grp Cap (vph)	115	1275		184	1526			276	351		59	
v/s Ratio Prot		0.64		c0.22	0.39			0.19	c0.09		c0.10	
v/s Ratio Perm	0.06			c1.30					0.21			
v/c Ratio	0.15	1.50		2.78	0.76			1.04	1.19		2.39	
Uniform Delay, d1	17.5	28.6		48.2	19.7			41.0	37.0		48.0	
Progression Factor	1.00	1.00		1.00	1.00			1.52	3.80		1.00	
Incremental Delay, d2	2.7	229.4		814.7	3.6			39.3	92.6		675.9	
Delay (s)	20.2	258.0		862.9	23.3			101.6	233.0		723.9	
Level of Service	C	F		F	C			F	F		F	
Approach Delay (s)		255.9			280.1			195.0			723.9	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	268.6	HCM Level of Service	F
HCM Volume to Capacity ratio	2.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	23.2
Intersection Capacity Utilization	131.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations			↗	↖	↔			↕	↗		↕		
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	
Total Lost time (s)			4.0	4.0	4.0			4.0	4.0		4.0		
Lane Util. Factor			1.00	0.95	0.95			0.95	1.00		0.95		
Frbp, ped/bikes			1.00	1.00	0.99			1.00	1.00		1.00		
Flpb, ped/bikes			1.00	1.00	1.00			1.00	1.00		1.00		
Frt			0.86	1.00	0.97			1.00	0.85		1.00		
Flt Protected			1.00	0.95	0.96			1.00	1.00		1.00		
Satd. Flow (prot)			1374	1433	1397			3015	1350		3012		
Flt Permitted			1.00	0.95	0.96			0.93	1.00		1.00		
Satd. Flow (perm)			1374	1433	1397			2812	1350		3012		
Volume (vph)	0	0	7	977	11	105	16	867	1699	0	702	4	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	
Adj. Flow (vph)	0	0	8	1110	12	119	18	985	1931	0	798	5	
RTOR Reduction (vph)	0	0	4	0	9	0	0	0	698	0	1	0	
Lane Group Flow (vph)	0	0	4	657	575	0	0	1003	1233	0	802	0	
Confl. Peds. (#/hr)	14						14	31				31	
Confl. Bikes (#/hr)							3					2	
Turn Type			custom	Prot			Perm		Perm				
Protected Phases				4	8			2				2	
Permitted Phases			4				2		2				
Actuated Green, G (s)			56.0	56.0	56.0			35.0	35.0			35.0	
Effective Green, g (s)			56.0	56.0	56.0			36.0	36.0			36.0	
Actuated g/C Ratio			0.56	0.56	0.56			0.36	0.36			0.36	
Clearance Time (s)			4.0	4.0	4.0			5.0	5.0			5.0	
Vehicle Extension (s)			7.0	7.0	3.0			3.0	3.0			3.0	
Lane Grp Cap (vph)			769	802	782			1012	486			1084	
v/s Ratio Prot				c0.46	0.41							0.27	
v/s Ratio Perm			0.00					0.36	c0.91				
v/c Ratio			0.01	0.82	0.73			0.99	2.54			0.74	
Uniform Delay, d1			9.7	17.9	16.5			31.8	32.0			27.9	
Progression Factor			1.00	1.00	1.00			0.77	5.04			1.30	
Incremental Delay, d2			0.0	8.1	3.6			6.7	692.0			0.4	
Delay (s)			9.7	26.0	20.1			31.3	853.3			36.7	
Level of Service			A	C	C			C	F			D	
Approach Delay (s)		9.7			23.2			572.3				36.7	
Approach LOS		A			C			F				D	
Intersection Summary													
HCM Average Control Delay			348.5									HCM Level of Service	F
HCM Volume to Capacity ratio			1.49										
Actuated Cycle Length (s)			100.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			126.7%									ICU Level of Service	H
Analysis Period (min)			15										
c Critical Lane Group													



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑	↗	↘	↗		↘	↕		↘	↕	↗
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	0.94	1.00	0.98		1.00	0.99		1.00	1.00	0.93
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1509	1588	1274	1489	1482		1509	2972		1509	3018	1250
Flt Permitted	0.15	1.00	1.00	0.53	1.00		0.10	1.00		0.10	1.00	1.00
Satd. Flow (perm)	234	1588	1274	824	1482		160	2972		164	3018	1250
Volume (vph)	545	398	156	31	341	144	130	1697	82	108	1180	164
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	551	402	158	31	344	145	131	1714	83	109	1192	166
RTOR Reduction (vph)	0	0	67	0	15	0	0	4	0	0	0	41
Lane Group Flow (vph)	551	402	91	31	474	0	131	1793	0	109	1192	125
Conf. Peds. (#/hr)	41		27	27		41	29		45	45		29
Conf. Bikes (#/hr)			1						3			3
Turn Type	pm+pt		Perm	pm+pt		pm+pt		pm+pt		pm+pt		Perm
Protected Phases	1	6		5	2		7	4		3		8
Permitted Phases	6		6	2		4			8			8
Actuated Green, G (s)	43.7	37.8	37.8	26.1	23.2		45.3	39.3		43.8	38.8	38.8
Effective Green, g (s)	44.2	38.3	38.3	25.1	23.2		44.8	39.8		42.8	38.8	38.8
Actuated g/C Ratio	0.44	0.38	0.38	0.25	0.23		0.45	0.40		0.43	0.39	0.39
Clearance Time (s)	3.0	4.5	4.5	3.0	4.0		3.0	4.5		3.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	1.0	2.5		1.0	5.0		1.0	5.0	5.0
Lane Grp Cap (vph)	320	608	488	219	344		139	1183		124	1171	485
v/s Ratio Prot	c0.29	0.25		0.00	0.32		c0.05	c0.60		0.04	0.40	
v/s Ratio Perm	c0.47		0.07	0.03			0.38			0.34		0.10
v/c Ratio	1.72	0.66	0.19	0.14	1.38		0.94	1.52		0.88	1.02	0.26
Uniform Delay, d1	28.7	25.5	20.5	28.6	38.4		23.2	30.1		49.7	30.6	20.8
Progression Factor	1.00	1.00	1.00	0.98	0.99		1.37	0.61		1.07	1.09	1.14
Incremental Delay, d2	337.7	2.7	0.2	0.1	187.0		11.7	232.6		31.8	25.4	0.8
Delay (s)	366.5	28.2	20.7	28.3	225.2		43.5	250.9		85.1	58.8	24.5
Level of Service	F	C	C	C	F		D	F		F	E	C
Approach Delay (s)		194.9			213.4			236.8			56.8	
Approach LOS		F			F			F			E	

Intersection Summary

HCM Average Control Delay	172.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	146.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↕↔		↔↔	↕↔		↔↔	↕↔			↕↕	↕↔
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.95			0.95	1.00
Frbp, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.97			1.00	0.94
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	2925		2927	2998		2927	2842			3018	1271
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	2927	2925		2927	2998		2927	2842			3018	1271
Volume (vph)	645	1718	148	361	916	17	253	1276	300	0	880	587
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	694	1847	159	388	985	18	272	1372	323	0	946	631
RTOR Reduction (vph)	0	7	0	0	1	0	0	21	0	0	0	260
Lane Group Flow (vph)	694	1999	0	388	1002	0	272	1674	0	0	946	371
Conf. Peds. (#/hr)	157		168	168		157	46		116	116		46
Conf. Bikes (#/hr)			17			14			1			
Turn Type	Prot			Prot			Prot					Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases												4
Actuated Green, G (s)	20.5	44.5		4.0	28.0		4.0	38.0			29.0	29.0
Effective Green, g (s)	20.5	45.0		4.0	28.5		5.0	39.0			30.0	30.0
Actuated g/C Ratio	0.20	0.45		0.04	0.28		0.05	0.39			0.30	0.30
Clearance Time (s)	4.0	4.5		4.0	4.5		5.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0		1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	600	1316		117	854		146	1108			905	381
v/s Ratio Prot	0.24	c0.68		c0.13	0.33		0.09	c0.59			0.31	
v/s Ratio Perm												0.29
v/c Ratio	1.16	1.52		3.32	1.17		1.86	1.51			1.05	0.97
Uniform Delay, d1	39.8	27.5		48.0	35.8		47.5	30.5			35.0	34.6
Progression Factor	0.99	0.49		0.79	1.39		1.00	1.00			1.63	2.78
Incremental Delay, d2	72.4	234.0		1058.8	87.4		413.4	234.7			36.1	29.0
Delay (s)	111.8	247.6		1096.7	137.2		460.9	265.2			93.2	125.2
Level of Service	F	F		F	F		F	F			F	F
Approach Delay (s)		212.7			404.8			292.2			106.0	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	246.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	137.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Fr _t	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.99	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	2988		1509	2992		1509	2930		1509	2980	
Fl _t Permitted	0.37	1.00		0.95	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	583	2988		1509	2992		151	2930		151	2980	
Volume (vph)	96	964	67	303	692	42	103	1687	407	83	1138	103
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	98	984	68	309	706	43	105	1721	415	85	1161	105
RTOR Reduction (vph)	0	6	0	0	4	0	0	23	0	0	7	0
Lane Group Flow (vph)	98	1046	0	309	745	0	105	2113	0	85	1259	0
Turn Type	Perm		Prot		Perm		Perm		Perm			
Protected Phases	8		7		4		6		2			
Permitted Phases	8						6		2			
Actuated Green, G (s)	25.0	25.0		11.0	39.0		41.0	41.0		41.0	41.0	
Effective Green, g (s)	26.0	26.0		10.0	40.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio	0.29	0.29		0.11	0.44		0.47	0.47		0.47	0.47	
Clearance Time (s)	5.0	5.0		3.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	168	863		168	1330		70	1367		70	1391	
v/s Ratio Prot	c0.35		c0.20		0.25		c0.72		0.42			
v/s Ratio Perm	0.17						0.69		0.56			
v/c Ratio	0.58	1.21		1.84	0.56		1.50	1.55		1.21	0.90	
Uniform Delay, d ₁	27.4	32.0		40.0	18.5		24.0	24.0		24.0	22.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d ₂	14.0	106.3		399.9	1.7		285.7	249.1		176.2	10.0	
Delay (s)	41.3	138.3		439.9	20.2		309.7	273.1		200.2	32.1	
Level of Service	D		F		C		F		F			C
Approach Delay (s)	130.0				142.8		274.8					42.7
Approach LOS	F				F		F					D

Intersection Summary

HCM Average Control Delay	168.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	145.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)					4.0			4.0		4.0	4.0	
Lane Util. Factor					1.00			0.95		1.00	0.95	
Frbp, ped/bikes					1.00			0.99		1.00	1.00	
Flpb, ped/bikes					0.99			1.00		1.00	1.00	
Frt					0.92			0.99		1.00	1.00	
Flt Protected					0.98			1.00		0.95	1.00	
Satd. Flow (prot)					1485			3117		1583	3167	
Flt Permitted					0.87			1.00		0.07	1.00	
Satd. Flow (perm)					1322			3117		109	3167	
Volume (vph)	0	0	0	96	0	138	0	1809	82	125	1510	0
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	0	0	0	110	0	159	0	2079	94	144	1736	0
RTOR Reduction (vph)	0	0	0	0	6	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	263	0	0	2170	0	144	1736	0
Conf. Peds. (#/hr)			20	20			47		58	58		47
Conf. Bikes (#/hr)			1						7			1
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)					30.5			61.0		61.0	61.0	
Effective Green, g (s)					31.0			61.0		61.0	61.0	
Actuated g/C Ratio					0.31			0.61		0.61	0.61	
Clearance Time (s)					4.5			4.0		4.0	4.0	
Vehicle Extension (s)					3.0			5.0		5.0	5.0	
Lane Grp Cap (vph)					410			1901		66	1932	
v/s Ratio Prot								0.70			0.55	
v/s Ratio Perm					c0.20					c1.32		
v/c Ratio					0.64			1.14		2.18	0.90	
Uniform Delay, d1					29.7			19.5		19.5	16.8	
Progression Factor					1.00			1.00		1.00	1.00	
Incremental Delay, d2					7.5			70.5		578.1	7.1	
Delay (s)					37.3			90.0		597.6	24.0	
Level of Service					D			F		F	C	
Approach Delay (s)		0.0			37.3			90.0			67.9	
Approach LOS		A			D			F			E	
Intersection Summary												
HCM Average Control Delay			77.1									HCM Level of Service E
HCM Volume to Capacity ratio			1.65									
Actuated Cycle Length (s)			100.0									Sum of lost time (s) 8.0
Intersection Capacity Utilization			95.4%									ICU Level of Service F
Analysis Period (min)			15									
c Critical Lane Group												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 			 		 	  	 
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00	1.00	0.91	
Frbp, ped/bikes	1.00	1.00	0.74	1.00	1.00		1.00	1.00	0.79	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3072	3167	1048	3072	3165		1583	3167	1113	1583	4396	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.09	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3072	3167	1048	3072	3165		153	3167	1113	168	4396	
Volume (vph)	189	1610	54	458	780	1	389	1767	468	12	1379	119
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	199	1695	57	482	821	1	409	1860	493	13	1452	125
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	73	0	8	0
Lane Group Flow (vph)	199	1695	57	482	822	0	409	1860	420	13	1569	0
Conf. Peds. (#/hr)	102		193	193		102	173		149	149		173
Conf. Bikes (#/hr)			6			6			9			5
Turn Type	Prot		pm+ov	Prot			pm+pt		pm+ov		pm+pt	
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases			2				8		8		4	
Actuated Green, G (s)	8.0	48.0	55.0	8.0	48.0		49.3	42.6	50.6	41.0	38.3	
Effective Green, g (s)	8.0	49.3	56.3	8.0	49.3		50.7	44.0	52.0	42.4	39.7	
Actuated g/C Ratio	0.07	0.41	0.47	0.07	0.41		0.42	0.37	0.43	0.35	0.33	
Clearance Time (s)	4.0	5.3	4.0	4.0	5.3		4.0	5.4	4.0	4.0	5.4	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	205	1301	527	205	1300		148	1161	519	91	1454	
v/s Ratio Prot	0.06	c0.54	0.01	c0.16	0.26		c0.16	0.59	0.05	0.00	0.36	
v/s Ratio Perm			0.05				c1.01		0.32	0.05		
v/c Ratio	0.97	1.30	0.11	2.35	0.63		2.76	1.60	0.81	0.14	1.08	
Uniform Delay, d1	55.9	35.4	17.8	56.0	28.1		29.5	38.0	29.7	31.9	40.1	
Progression Factor	0.91	0.84	0.81	1.03	0.74		1.21	1.13	1.83	1.00	1.00	
Incremental Delay, d2	12.7	136.8	0.0	618.8	1.7		795.3	271.3	0.9	0.7	48.1	
Delay (s)	63.5	166.4	14.5	676.4	22.4		830.9	314.3	55.2	32.6	88.2	
Level of Service	E	F	B	F	C		F	F	E	C	F	
Approach Delay (s)		151.4			264.1			344.6			87.8	
Approach LOS		F			F			F			F	
Intersection Summary												
HCM Average Control Delay			227.6			HCM Level of Service		F				
HCM Volume to Capacity ratio			2.03									
Actuated Cycle Length (s)			120.0	Sum of lost time (s)		12.0						
Intersection Capacity Utilization			136.4%	ICU Level of Service		H						
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘	↑↑	↗	↘	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3167	1417	1583	3029		1583	3167	1417	1583	3115	
Flt Permitted	0.20	1.00	1.00	0.07	1.00		0.11	1.00	1.00	0.15	1.00	
Satd. Flow (perm)	341	3167	1417	113	3029		187	3167	1417	250	3115	
Volume (vph)	174	1454	159	117	628	258	191	962	267	220	949	117
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	185	1547	169	124	668	274	203	1023	284	234	1010	124
RTOR Reduction (vph)	0	0	26	0	25	0	0	0	8	0	8	0
Lane Group Flow (vph)	185	1547	143	124	917	0	203	1023	276	234	1126	0
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6		6	2			8		8		4	
Actuated Green, G (s)	57.1	57.1	57.1	57.1	57.1		51.5	51.5	51.5	51.5	51.5	
Effective Green, g (s)	59.0	59.0	59.0	59.0	59.0		53.0	53.0	53.0	53.0	53.0	
Actuated g/C Ratio	0.49	0.49	0.49	0.49	0.49		0.44	0.44	0.44	0.44	0.44	
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9		5.5	5.5	5.5	5.5	5.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	168	1557	697	56	1489		83	1399	626	110	1376	
v/s Ratio Prot		0.49			0.30			0.32			0.36	
v/s Ratio Perm	0.54		0.10	c1.10			c1.08		0.19	0.94		
v/c Ratio	1.10	0.99	0.21	2.21	0.62		2.45	0.73	0.44	2.13	0.82	
Uniform Delay, d1	30.5	30.3	17.2	30.5	22.2		33.5	27.6	23.2	33.5	29.3	
Progression Factor	1.26	1.26	1.36	0.69	0.69		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	54.3	5.5	0.1	551.7	0.2		685.4	3.4	2.2	536.5	5.5	
Delay (s)	92.6	43.8	23.5	572.8	15.5		718.9	31.0	25.5	570.0	34.8	
Level of Service	F	D	C	F	B		F	C	C	F	C	
Approach Delay (s)		46.8			80.3			122.5			126.4	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	91.1	HCM Level of Service	F
HCM Volume to Capacity ratio	2.34		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	111.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00		0.95		0.95	0.95	1.00		1.00	
Fr't	1.00	1.00	0.85		1.00		1.00	1.00	0.85		0.97	
Flt Protected	0.95	1.00	1.00		1.00		0.95	0.98	1.00		0.99	
Satd. Flow (prot)	1509	3018	1350		3008		1433	1480	1350		1513	
Flt Permitted	0.13	1.00	1.00		1.00		0.95	0.98	1.00		0.99	
Satd. Flow (perm)	201	3018	1350		3008		1433	1480	1350		1513	
Volume (vph)	79	1519	623	0	1237	26	290	133	53	20	31	16
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	82	1582	649	0	1289	27	302	139	55	21	32	17
RTOR Reduction (vph)	0	0	71	0	1	0	0	0	45	0	10	0
Lane Group Flow (vph)	82	1582	578	0	1315	0	215	226	10	0	60	0
Turn Type	pm+pt		Perm			Split		Perm		Split		
Protected Phases	1	6			2		4	4		3	3	
Permitted Phases	6		6						4			
Actuated Green, G (s)	74.9	69.6	69.6		69.6		21.0	21.0	21.0		9.1	
Effective Green, g (s)	73.9	69.6	69.6		69.6		21.0	21.0	21.0		9.1	
Actuated g/C Ratio	0.62	0.58	0.58		0.58		0.18	0.18	0.18		0.08	
Clearance Time (s)	3.0	4.0	4.0		4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	1.0	6.0	6.0		6.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	171	1750	783		1745		251	259	236		115	
v/s Ratio Prot	c0.02	c0.52			0.44		0.15	c0.15			c0.04	
v/s Ratio Perm	0.28		0.43						0.01			
v/c Ratio	0.48	0.90	0.74		0.75		0.86	0.87	0.04		0.52	
Uniform Delay, d1	13.6	22.3	18.5		18.8		48.0	48.2	41.1		53.4	
Progression Factor	1.33	0.61	0.52		1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	0.9	0.6		3.1		23.8	26.0	0.1		4.2	
Delay (s)	18.1	14.4	10.2		21.9		71.8	74.1	41.2		57.5	
Level of Service	B	B	B		C		E	E	D		E	
Approach Delay (s)		13.3			21.9			69.5			57.5	
Approach LOS		B			C			E			E	

Intersection Summary

HCM Average Control Delay	23.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↘	↕		↘	↕	↘	↘	↕	↕
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00	0.84	1.00	0.94	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3002		1509	2916		1509	3018	1128	1509	2721	
Flt Permitted	0.07	1.00		0.07	1.00		0.17	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	107	3002		108	2916		276	3018	1128	276	2721	
Volume (vph)	158	2491	37	217	1468	110	34	1146	129	46	706	286
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	174	2737	41	238	1613	121	37	1259	142	51	776	314
RTOR Reduction (vph)	0	1	0	0	5	0	0	0	58	0	43	0
Lane Group Flow (vph)	174	2777	0	238	1729	0	37	1259	84	51	1047	0
Conf. Peds. (#/hr)	277		134	134		277	133		103	103		133
Conf. Bikes (#/hr)			12			3			1			2
Turn Type	pm+pt		pm+pt		Perm		Perm		Perm			
Protected Phases	5	2	1	6	8	8	8	4				
Permitted Phases	2		6		8	8	4					
Actuated Green, G (s)	65.5	59.5	65.0	59.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	
Effective Green, g (s)	65.5	59.5	64.5	59.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	
Actuated g/C Ratio	0.66	0.60	0.64	0.59	0.23	0.23	0.23	0.23	0.23	0.23	0.23	
Clearance Time (s)	4.0	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	1.0	5.0	1.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	154	1786	147	1720	63	694	259	63	626			
v/s Ratio Prot	0.07	0.92	c0.09	0.59		c0.42			0.38			
v/s Ratio Perm	0.67		c0.96		0.13		0.07	0.18				
v/c Ratio	1.13	1.55	1.62	1.01	0.59	1.81	0.33	0.81	1.67			
Uniform Delay, d1	27.2	20.2	49.5	20.5	34.3	38.5	32.0	36.4	38.5			
Progression Factor	1.09	0.96	0.65	1.67	1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	66.5	249.9	281.4	7.8	34.3	372.0	3.3	67.8	309.5			
Delay (s)	96.1	269.3	313.6	42.0	68.6	410.5	35.4	104.2	348.0			
Level of Service	F	F	F	D	E	F	D	F	F			
Approach Delay (s)		259.1		74.8		364.7			337.1			
Approach LOS		F		E		F			F			

Intersection Summary

HCM Average Control Delay	242.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	151.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↗		↖	↗	↖
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1509	3009		1509	1588	1350	1509	2971		1509	3018	1350
Flt Permitted	0.22	1.00		0.19	1.00	1.00	0.20	1.00		0.11	1.00	1.00
Satd. Flow (perm)	352	3009		303	1588	1350	316	2971		176	3018	1350
Volume (vph)	114	815	16	266	510	184	100	1164	135	242	888	167
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	125	896	18	292	560	202	110	1279	148	266	976	184
RTOR Reduction (vph)	0	2	0	0	0	18	0	12	0	0	0	96
Lane Group Flow (vph)	125	912	0	292	560	184	110	1415	0	266	976	88
Turn Type	Perm			Perm		Perm	Perm			Perm		Perm
Protected Phases		2			2			4			4	
Permitted Phases	2			2		2	4			4		4
Actuated Green, G (s)	31.0	31.0		31.0	31.0	31.0	36.0	36.0		36.0	36.0	36.0
Effective Green, g (s)	31.0	31.0		31.0	31.0	31.0	36.0	36.0		36.0	36.0	36.0
Actuated g/C Ratio	0.41	0.41		0.41	0.41	0.41	0.48	0.48		0.48	0.48	0.48
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	145	1244		125	656	558	152	1426		84	1449	648
v/s Ratio Prot		0.30			0.35			0.48			0.32	
v/s Ratio Perm	0.36			c0.96		0.14	0.35			c1.51		0.07
v/c Ratio	0.86	0.73		2.34	0.85	0.33	0.72	0.99		3.17	0.67	0.14
Uniform Delay, d1	20.1	18.5		22.0	19.9	14.9	15.5	19.4		19.5	15.0	10.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	45.0	3.9		625.4	13.3	1.6	25.7	22.1		1005.4	2.5	0.4
Delay (s)	65.0	22.4		647.4	33.3	16.5	41.2	41.4		1024.9	17.5	11.3
Level of Service	E	C		F	C	B	D	D		F	B	B
Approach Delay (s)		27.5			200.2			41.4			204.6	
Approach LOS		C			F			D			F	

Intersection Summary

HCM Average Control Delay	117.7	HCM Level of Service	F
HCM Volume to Capacity ratio	2.77		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖	↖	↕	↖
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.91	0.95	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1509	2978		1509	2992		1433	1436	1282	1509	1571	
Flt Permitted	0.19	1.00		0.05	1.00		0.95	0.99	1.00	0.95	1.00	
Satd. Flow (perm)	303	2978		86	2992		1433	1436	1282	1509	1571	
Volume (vph)	14	1585	152	435	1084	65	447	349	485	21	322	26
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	15	1668	160	458	1141	68	471	367	511	22	339	27
RTOR Reduction (vph)	0	6	0	0	4	0	0	0	142	0	3	0
Lane Group Flow (vph)	15	1822	0	458	1205	0	417	421	369	22	363	0
Turn Type	Perm			pm+pt			Split		pm+ov	Split		
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6			2					4			
Actuated Green, G (s)	70.0	70.0		77.0	77.0		14.0	14.0	18.0	18.0	18.0	
Effective Green, g (s)	70.0	70.0		77.0	77.0		14.0	14.0	17.0	17.0	17.0	
Actuated g/C Ratio	0.58	0.58		0.64	0.64		0.12	0.12	0.14	0.14	0.14	
Clearance Time (s)	4.0	4.0		3.0	4.0		4.0	4.0	3.0	3.0	3.0	
Vehicle Extension (s)	4.5	4.5		1.0	4.5		2.0	2.0	1.0	2.0	2.0	
Lane Grp Cap (vph)	177	1737		91	1920		167	168	224	214	223	
v/s Ratio Prot		0.61		c0.13	0.40		0.29	c0.29	0.04	0.01	c0.23	
v/s Ratio Perm	0.05			c3.12					0.25			
v/c Ratio	0.08	1.05		5.03	0.63		2.50	2.51	1.65	0.10	1.63	
Uniform Delay, d1	11.0	25.0		27.8	12.9		53.0	53.0	51.5	44.9	51.5	
Progression Factor	1.00	1.00		2.44	0.63		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	35.7		1830.8	1.0		691.2	695.1	309.5	1.0	302.9	
Delay (s)	11.9	60.7		1898.6	9.2		744.2	748.1	361.0	45.8	354.4	
Level of Service	B	E		F	A		F	F	F	D	F	
Approach Delay (s)		60.4			528.3			600.3			336.9	
Approach LOS		E			F			F			F	

Intersection Summary

HCM Average Control Delay	368.3	HCM Level of Service	F
HCM Volume to Capacity ratio	4.11		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	151.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	↗
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.94			0.97		1.00	0.99		1.00	0.98	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1493			1490		1509	2973		1509	2956	
Flt Permitted		0.97			0.71		0.21	1.00		0.17	1.00	
Satd. Flow (perm)		1452			1090		341	2973		276	2956	
Volume (vph)	49	250	207	44	10	17	151	1138	126	10	784	123
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	51	260	216	46	10	18	157	1185	131	10	817	128
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	527	0	0	74	0	157	1316	0	10	945	0
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases	2		6		6		4		8			
Permitted Phases	2		6		6		4		8			
Actuated Green, G (s)	19.4		19.4		19.4		24.0		24.0		24.0	
Effective Green, g (s)	20.0		20.0		20.0		23.0		23.0		23.0	
Actuated g/C Ratio	0.39		0.39		0.39		0.45		0.45		0.45	
Clearance Time (s)	4.6		4.6		4.6		3.0		3.0		3.0	
Vehicle Extension (s)	4.5		4.5		4.5		3.0		3.0		3.0	
Lane Grp Cap (vph)	569		427		427		154		1341		124	
v/s Ratio Prot							0.44				0.32	
v/s Ratio Perm	c0.36		0.07		0.07		c0.46		0.04			
v/c Ratio	0.93		0.17		0.17		1.02		0.98		0.08	
Uniform Delay, d1	14.8		10.1		10.1		14.0		13.8		8.0	
Progression Factor	1.00		1.00		1.00		1.00		1.00		1.00	
Incremental Delay, d2	23.3		0.9		0.9		77.7		20.1		0.3	
Delay (s)	38.1		11.0		11.0		91.7		33.9		8.3	
Level of Service	D		B		B		F		C		A	
Approach Delay (s)	38.1		11.0		11.0		40.1		40.1		13.0	
Approach LOS	D		B		B		D		D		B	

Intersection Summary

HCM Average Control Delay	30.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	51.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	0.99			0.91			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	
Frt	1.00	1.00		1.00	0.99			0.92			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.98	
Satd. Flow (prot)	1509	3000		1509	2978			1319			1525	
Flt Permitted	0.07	1.00		0.08	1.00			0.97			0.47	
Satd. Flow (perm)	114	3000		123	2978			1281			732	
Volume (vph)	16	2216	33	240	1495	57	49	205	380	38	55	8
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	17	2357	35	255	1590	61	52	218	404	40	59	9
RTOR Reduction (vph)	0	1	0	0	3	0	0	50	0	0	3	0
Lane Group Flow (vph)	17	2391	0	255	1648	0	0	624	0	0	105	0
Conf. Peds. (#/hr)	63		90	90		63	52		90	90		52
Conf. Bikes (#/hr)			4			3						1
Turn Type	pm+pt		pm+pt		Perm			Perm				
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	65.5	58.5		55.0	51.5			26.0			26.0	
Effective Green, g (s)	65.5	58.5		54.5	51.5			26.5			26.5	
Actuated g/C Ratio	0.66	0.58		0.54	0.52			0.26			0.26	
Clearance Time (s)	3.5	4.0		3.5	4.0			4.5			4.5	
Vehicle Extension (s)	1.0	5.0		1.0	5.0			3.0			3.0	
Lane Grp Cap (vph)	214	1755		109	1534			339			194	
v/s Ratio Prot	0.01	c0.80		c0.07	0.55							
v/s Ratio Perm	0.04			c1.21				c0.49			0.14	
v/c Ratio	0.08	1.36		2.34	1.07			1.84			0.54	
Uniform Delay, d1	16.6	20.8		50.7	24.2			36.8			31.5	
Progression Factor	1.00	1.00		1.84	0.57			1.00			1.00	
Incremental Delay, d2	0.7	166.9		605.3	34.9			389.6			3.1	
Delay (s)	17.3	187.6		698.6	48.9			426.4			34.6	
Level of Service	B	F		F	D			F			C	
Approach Delay (s)		186.4			135.8			426.4			34.6	
Approach LOS		F			F			F			C	

Intersection Summary

HCM Average Control Delay	196.0	HCM Level of Service	F
HCM Volume to Capacity ratio	2.18		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	146.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖	↖	↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3152		1583	3079		1583	1667	1417	1583	1635	
Flt Permitted	0.20	1.00		0.20	1.00		0.17	1.00	1.00	0.28	1.00	
Satd. Flow (perm)	327	3152		327	3079		283	1667	1417	462	1635	
Volume (vph)	98	1473	48	91	701	158	74	600	136	89	646	93
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	102	1534	50	95	730	165	77	625	142	93	673	97
RTOR Reduction (vph)	0	4	0	0	32	0	0	0	1	0	9	0
Lane Group Flow (vph)	102	1580	0	95	863	0	77	625	141	93	761	0
Turn Type	Perm			Perm			Perm			Perm	Perm	
Protected Phases	6			2			8			8	4	
Permitted Phases	6			2			8			8	4	
Actuated Green, G (s)	20.1	20.1		20.1	20.1		31.0	31.0	31.0	31.0	31.0	
Effective Green, g (s)	20.4	20.4		20.4	20.4		31.6	31.6	31.6	31.6	31.6	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.53	0.53	0.53	0.53	0.53	
Clearance Time (s)	4.3	4.3		4.3	4.3		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	1072		111	1047		149	878	746	243	861	
v/s Ratio Prot	c0.50			0.28			0.38			c0.47		
v/s Ratio Perm	0.31			0.29			0.27			0.10		0.20
v/c Ratio	0.92	1.47		0.86	0.82		0.52	0.71	0.19	0.38	0.88	
Uniform Delay, d1	19.0	19.8		18.4	18.2		9.2	10.8	7.5	8.4	12.6	
Progression Factor	1.00	1.00		1.05	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	65.7	218.4		7.7	0.7		12.2	4.9	0.6	4.5	12.8	
Delay (s)	84.7	238.2		27.1	18.9		21.5	15.6	8.0	12.9	25.4	
Level of Service	F	F		C	B		C	B	A	B	C	
Approach Delay (s)	228.9			19.7			14.9			24.1		
Approach LOS	F			B			B			C		

Intersection Summary

HCM Average Control Delay	100.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	121.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↙	↕			↕			↕	↙
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)				4.0	4.0			4.0			4.0	4.0
Lane Util. Factor				1.00	0.95			0.95			0.95	1.00
Frt				1.00	1.00			1.00			1.00	0.85
Flt Protected				0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)				1509	3006			3004			3018	1350
Flt Permitted				0.95	1.00			0.88			1.00	1.00
Satd. Flow (perm)				1509	3006			2652			3018	1350
Volume (vph)	0	0	0	206	1349	36	40	385	0	0	400	100
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	229	1499	40	44	428	0	0	444	111
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	229	1537	0	0	472	0	0	444	111
Turn Type				custom			custom					Free
Protected Phases				2	2		3	3			1	
Permitted Phases				4	4		6	6				Free
Actuated Green, G (s)				34.9	34.9			27.5			20.0	100.0
Effective Green, g (s)				33.5	33.5			26.5			20.0	100.0
Actuated g/C Ratio				0.34	0.34			0.26			0.20	1.00
Clearance Time (s)				3.0	3.0			3.0			4.0	
Vehicle Extension (s)				1.0	1.0			1.0			4.0	
Lane Grp Cap (vph)				566	1127			717			604	1350
v/s Ratio Prot				0.06	c0.19			c0.03			c0.15	
v/s Ratio Perm				0.10	0.32			c0.15				0.08
v/c Ratio				0.40	1.36			0.66			0.74	0.08
Uniform Delay, d1				26.1	33.2			32.7			37.5	0.0
Progression Factor				1.00	1.00			0.39			1.00	1.00
Incremental Delay, d2				2.1	169.5			0.8			7.8	0.1
Delay (s)				28.2	202.7			13.6			45.3	0.1
Level of Service				C	F			B			D	A
Approach Delay (s)		0.0			180.1			13.6			36.2	
Approach LOS		A			F			B			D	

Intersection Summary

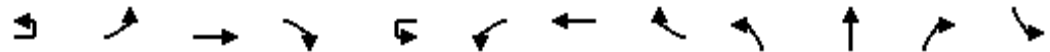
HCM Average Control Delay	123.4	HCM Level of Service	F
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1583	1662		1583	1660			1645			1623	
Flt Permitted	0.16	1.00		0.16	1.00			0.63			0.98	
Satd. Flow (perm)	261	1662		261	1660			1043			1597	
Volume (vph)	160	635	10	131	743	10	116	554	17	17	741	130
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	167	661	10	136	774	10	121	577	18	18	772	135
RTOR Reduction (vph)	0	1	0	0	1	0	0	2	0	0	10	0
Lane Group Flow (vph)	167	670	0	136	783	0	0	714	0	0	915	0
Conf. Peds. (#/hr)	66		13	13		66	21		26	26		21
Conf. Bikes (#/hr)			27			8						6
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)	25.5	25.5		25.5	25.5			26.5			26.5	
Effective Green, g (s)	25.5	25.5		25.5	25.5			26.5			26.5	
Actuated g/C Ratio	0.42	0.42		0.42	0.42			0.44			0.44	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	111	706		111	706			461			705	
v/s Ratio Prot		0.40			0.47							
v/s Ratio Perm	c0.64			0.52				c0.68			0.57	
v/c Ratio	1.50	0.95		1.23	1.11			1.55			1.30	
Uniform Delay, d1	17.2	16.6		17.2	17.2			16.8			16.8	
Progression Factor	1.00	1.00		1.01	1.02			2.16			1.00	
Incremental Delay, d2	268.0	23.4		108.8	51.6			254.5			144.3	
Delay (s)	285.2	40.0		126.2	69.2			290.7			161.1	
Level of Service	F	D		F	E			F			F	
Approach Delay (s)		88.9			77.7			290.7			161.1	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	148.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	162.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔	↔↔↔	↔		↔	↔↔↔	↔	↔	↔		↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		1.00	0.91	1.00		1.00	0.91	1.00	1.00	1.00		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.97		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1583	4550	1417		1583	4550	1417	1583	1617		1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.14	1.00		0.17
Satd. Flow (perm)		1583	4550	1417		1583	4550	1417	239	1617		280
Volume (vph)	31	176	1961	45	14	82	2440	147	50	341	85	390
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	31	178	1981	45	14	83	2465	148	51	344	86	394
RTOR Reduction (vph)	0	0	0	19	0	0	0	56	0	8	0	0
Lane Group Flow (vph)	0	209	1981	26	0	97	2465	92	51	422	0	394
Turn Type	Prot	Prot		Perm	Prot	Prot		pm+ov	pm+pt			pm+pt
Protected Phases	1	1	6		5	5	2	7	3	8		7
Permitted Phases				6				2	8			4
Actuated Green, G (s)		16.0	43.2	43.2		12.3	39.5	51.5	40.1	33.5		49.5
Effective Green, g (s)		16.0	44.2	44.2		12.3	40.5	52.5	42.1	35.5		51.5
Actuated g/C Ratio		0.13	0.37	0.37		0.10	0.34	0.44	0.35	0.30		0.43
Clearance Time (s)		4.0	5.0	5.0		4.0	5.0	4.0	4.0	6.0		4.0
Vehicle Extension (s)		3.0	4.4	4.4		3.0	4.3	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		211	1676	522		162	1536	667	158	478		250
v/s Ratio Prot		c0.13	c0.44			0.06	c0.54	0.01	0.02	0.26		c0.16
v/s Ratio Perm				0.02				0.05	0.10			c0.52
v/c Ratio		0.99	1.18	0.05		0.60	1.60	0.14	0.32	0.88		1.58
Uniform Delay, d1		51.9	37.9	24.4		51.5	39.8	20.2	28.8	40.3		28.8
Progression Factor		1.00	1.00	1.00		0.84	1.77	3.31	1.00	1.00		1.15
Incremental Delay, d2		59.1	88.4	0.2		0.5	272.4	0.0	1.2	17.3		261.0
Delay (s)		111.0	126.3	24.6		44.0	342.7	67.0	30.0	57.6		294.0
Level of Service		F	F	C		D	F	E	C	E		F
Approach Delay (s)			122.8				316.9			54.7		
Approach LOS			F				F			D		

Intersection Summary			
HCM Average Control Delay	204.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	128.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations	↱	
Ideal Flow (vphpl)	1700	1700
Total Lost time (s)	4.0	
Lane Util. Factor	1.00	
Frt	0.99	
Flt Protected	1.00	
Satd. Flow (prot)	1643	
Flt Permitted	1.00	
Satd. Flow (perm)	1643	
Volume (vph)	484	50
Peak-hour factor, PHF	0.99	0.99
Adj. Flow (vph)	489	51
RTOR Reduction (vph)	3	0
Lane Group Flow (vph)	537	0
Turn Type		
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	38.9	
Effective Green, g (s)	40.9	
Actuated g/C Ratio	0.34	
Clearance Time (s)	6.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	560	
v/s Ratio Prot	0.33	
v/s Ratio Perm		
v/c Ratio	0.96	
Uniform Delay, d1	38.7	
Progression Factor	1.10	
Incremental Delay, d2	4.9	
Delay (s)	47.6	
Level of Service	D	
Approach Delay (s)	151.5	
Approach LOS	F	

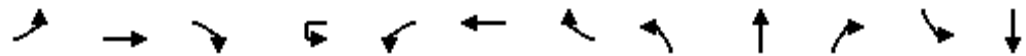
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	1623		1566	1650		1583	3059		1583	3002	
Flt Permitted	0.19	1.00		0.31	1.00		0.12	1.00		0.12	1.00	
Satd. Flow (perm)	319	1623		516	1650		196	3059		196	3002	
Volume (vph)	288	478	70	260	676	35	91	1352	260	7	1162	315
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	294	488	71	265	690	36	93	1380	265	7	1186	321
RTOR Reduction (vph)	0	5	0	0	2	0	0	17	0	0	27	0
Lane Group Flow (vph)	294	554	0	265	724	0	93	1628	0	7	1480	0
Conf. Peds. (#/hr)	29		30	30		29	48		28	28		48
Conf. Bikes (#/hr)			26			9			4			2
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	47.0	47.0		47.0	47.0		33.1	33.1		33.1	33.1	
Effective Green, g (s)	48.0	48.0		48.0	48.0		34.0	34.0		34.0	34.0	
Actuated g/C Ratio	0.53	0.53		0.53	0.53		0.38	0.38		0.38	0.38	
Clearance Time (s)	5.0	5.0		5.0	5.0		4.9	4.9		4.9	4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	170	866		275	880		74	1156		74	1134	
v/s Ratio Prot		0.34			0.44			c0.53			0.49	
v/s Ratio Perm	c0.92			0.51			0.47			0.04		
v/c Ratio	1.73	0.64		0.96	0.82		1.26	1.41		0.09	1.30	
Uniform Delay, d1	21.0	14.9		20.2	17.5		28.0	28.0		18.1	28.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	351.7	3.6		45.7	8.6		188.5	188.8		2.5	143.6	
Delay (s)	372.7	18.5		65.9	26.0		216.5	216.8		20.6	171.6	
Level of Service	F	B		E	C		F	F		C	F	
Approach Delay (s)		140.6			36.7			216.8			170.9	
Approach LOS		F			D			F			F	

Intersection Summary

HCM Average Control Delay	155.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	133.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗		↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1583	4550	1417		1583	4550	1417	1583	3167	1417	1583	3167
Flt Permitted	0.95	1.00	1.00		0.95	1.00	1.00	0.11	1.00	1.00	0.11	1.00
Satd. Flow (perm)	1583	4550	1417		1583	4550	1417	180	3167	1417	180	3167
Volume (vph)	215	1424	287	30	55	1756	323	172	1011	224	201	1166
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	229	1515	305	32	59	1868	344	183	1076	238	214	1240
RTOR Reduction (vph)	0	0	101	0	0	0	162	0	0	151	0	0
Lane Group Flow (vph)	229	1515	204	0	91	1868	182	183	1076	87	214	1240
Turn Type	Prot	pm+ov		Prot	Prot	Perm pm+pt				Perm pm+pt		
Protected Phases	1	6	3	5	5	2	3		8	8		7
Permitted Phases	6						2	8	8		4	
Actuated Green, G (s)	18.8	36.0	45.0	9.7		26.9	26.9	43.8	34.8	34.8	43.8	34.8
Effective Green, g (s)	18.8	37.3	47.3	9.7		28.2	28.2	47.0	37.0	37.0	47.0	37.0
Actuated g/C Ratio	0.17	0.34	0.43	0.09		0.26	0.26	0.43	0.34	0.34	0.43	0.34
Clearance Time (s)	4.0	5.3	5.0	4.0		5.3	5.3	5.0	6.2	6.2	5.0	6.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0	3.0	3.0	4.2	4.2	3.0	3.6
Lane Grp Cap (vph)	271	1543	661	140		1166	363	204	1065	477	204	1065
v/s Ratio Prot	0.14	c0.33	0.03	0.06		c0.41	0.08		0.34	c0.10		c0.39
v/s Ratio Perm	0.12						0.13	0.30	0.06		0.35	
v/c Ratio	0.85	0.98	0.31	0.65		1.60	0.50	0.90	1.01	0.18	1.05	1.16
Uniform Delay, d1	44.2	36.0	20.6	48.5		40.9	34.9	51.4	36.5	25.8	28.7	36.5
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.8	19.0	0.3	10.3		275.0	4.9	35.8	30.1	0.3	76.5	84.4
Delay (s)	65.0	55.0	20.9	58.8		315.9	39.8	87.2	66.6	26.1	105.2	120.9
Level of Service	E	D	C	E		F	D	F	E	C	F	F
Approach Delay (s)	51.0				264.5				62.7			108.2
Approach LOS	D				F				E			F

Intersection Summary

HCM Average Control Delay	131.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	7
Ideal Flow (vphpl)	1700
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1417
Flt Permitted	1.00
Satd. Flow (perm)	1417
Volume (vph)	152
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	162
RTOR Reduction (vph)	23
Lane Group Flow (vph)	139
Turn Type	pm+ov
Protected Phases	1
Permitted Phases	4
Actuated Green, G (s)	53.6
Effective Green, g (s)	55.8
Actuated g/C Ratio	0.51
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	719
v/s Ratio Prot	0.03
v/s Ratio Perm	0.06
v/c Ratio	0.19
Uniform Delay, d1	14.8
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	14.9
Level of Service	B
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑			↑↑↑	↔	↔	↔↔↔	↔			
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.91			0.86	1.00	0.86	0.81	0.86			
Frt	1.00	1.00			1.00	0.85	1.00	0.97	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3072	4550			5733	1417	1362	3901	1218			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3072	4550			5733	1417	1362	3901	1218			
Volume (vph)	897	1677	0	0	1553	525	815	934	738	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	965	1803	0	0	1670	565	876	1004	794	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	8	0	11	11	0	0	0
Lane Group Flow (vph)	965	1803	0	0	1670	557	539	1624	489	0	0	0
Turn Type	Prot				Perm		Split	Perm				
Protected Phases	1	6			2			4	4			
Permitted Phases					2						4	
Actuated Green, G (s)	25.0	70.0			41.0	41.0	39.2	39.2	39.2			
Effective Green, g (s)	25.0	71.0			42.0	42.0	41.0	41.0	41.0			
Actuated g/C Ratio	0.21	0.59			0.35	0.35	0.34	0.34	0.34			
Clearance Time (s)	4.0	5.0			5.0	5.0	5.8	5.8	5.8			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	640	2692			2007	496	465	1333	416			
v/s Ratio Prot	c0.31	0.40			0.29			0.40	c0.42			
v/s Ratio Perm					c0.39						0.40	
v/c Ratio	1.51	0.67			0.83	1.12	1.16	1.22	1.18			
Uniform Delay, d1	47.5	16.6			35.8	39.0	39.5	39.5	39.5			
Progression Factor	1.05	1.47			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	233.1	0.8			4.2	78.3	93.3	105.2	101.3			
Delay (s)	282.8	25.1			40.0	117.3	132.8	144.7	140.8			
Level of Service	F	C			D	F	F	F	F			
Approach Delay (s)	114.9				59.5		141.6				0.0	
Approach LOS	F				E		F				A	

Intersection Summary

HCM Average Control Delay	108.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑		↑↑	↑↑↑					↑	↑↑	↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.81		0.97	0.91					0.91	0.86	0.91
Frt		0.98		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		6613		3072	4550					1441	2820	1289
Flt Permitted		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (perm)		6613		3072	4550					1441	2820	1289
Volume (vph)	0	1901	298	645	1891	0	0	0	0	495	397	261
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	1980	310	672	1970	0	0	0	0	516	414	272
RTOR Reduction (vph)	0	23	0	0	0	0	0	0	0	0	0	12
Lane Group Flow (vph)	0	2267	0	672	1970	0	0	0	0	311	619	260
Turn Type				Prot						Split		Perm
Protected Phases		2		1	6					4	4	
Permitted Phases												4
Actuated Green, G (s)		43.9		30.0	78.4					31.9	31.9	31.9
Effective Green, g (s)		44.6		30.5	79.1					32.9	32.9	32.9
Actuated g/C Ratio		0.37		0.25	0.66					0.27	0.27	0.27
Clearance Time (s)		4.7		4.5	4.7					5.0	5.0	5.0
Vehicle Extension (s)		3.0		4.0	3.0					4.0	4.0	4.0
Lane Grp Cap (vph)		2458		781	2999					395	773	353
v/s Ratio Prot		c0.34		c0.22	0.43					0.22	c0.22	
v/s Ratio Perm												0.20
v/c Ratio		0.92		0.86	0.66					0.79	0.80	0.74
Uniform Delay, d1		36.0		42.7	12.3					40.3	40.5	39.6
Progression Factor		1.00		0.53	1.52					1.00	1.00	1.00
Incremental Delay, d2		7.2		4.1	0.4					10.5	6.3	8.3
Delay (s)		43.3		26.9	19.1					50.8	46.8	47.8
Level of Service		D		C	B					D	D	D
Approach Delay (s)		43.3			21.1			0.0			48.1	
Approach LOS		D			C			A			D	
Intersection Summary												
HCM Average Control Delay			34.7			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			108.5%			ICU Level of Service				G		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	0.97		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			0.99			1.00	
Frt	1.00	0.96		1.00	1.00			0.97			0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.97			1.00	
Satd. Flow (prot)	1575	1560		1583	1660			1538			1632	
Flt Permitted	0.21	1.00		0.16	1.00			0.58			0.93	
Satd. Flow (perm)	353	1560		267	1660			912			1524	
Volume (vph)	13	667	237	425	542	10	470	126	195	29	298	31
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	14	710	252	452	577	11	500	134	207	31	317	33
RTOR Reduction (vph)	0	22	0	0	1	0	0	20	0	0	6	0
Lane Group Flow (vph)	14	940	0	452	587	0	0	821	0	0	376	0
Conf. Peds. (#/hr)	10		27	27		10	17		16	16		17
Conf. Bikes (#/hr)			30			16			3			10
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	6		2		2		8		8		4	
Permitted Phases	6		2		2		8		8		4	
Actuated Green, G (s)	25.0	25.0		25.0	25.0			27.0			27.0	
Effective Green, g (s)	25.0	25.0		25.0	25.0			27.0			27.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	147	650		111	692			410			686	
v/s Ratio Prot		0.60			0.35							
v/s Ratio Perm	0.04			c1.69				c0.90			0.25	
v/c Ratio	0.10	1.45		4.07	0.85			2.00			0.55	
Uniform Delay, d1	10.6	17.5		17.5	15.8			16.5			12.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.3	209.7		1403.6	12.3			459.9			0.9	
Delay (s)	11.9	227.2		1421.1	28.1			476.4			12.9	
Level of Service	B	F		F	C			F			B	
Approach Delay (s)		224.1			633.5			476.4			12.9	
Approach LOS		F			F			F			B	

Intersection Summary

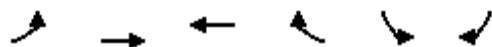
HCM Average Control Delay	396.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.99		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	167.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖		↖	↖↖↖		↖	↖		↖	↖	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4538		1583	4507		1583	1617		1583	1591	
Flt Permitted	0.07	1.00		0.08	1.00		0.09	1.00		0.48	1.00	
Satd. Flow (perm)	112	4538		137	4507		148	1617		806	1591	
Volume (vph)	111	1615	30	40	1646	110	44	200	50	87	434	188
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	116	1682	31	42	1715	115	46	208	52	91	452	196
RTOR Reduction (vph)	0	2	0	0	6	0	0	8	0	0	10	0
Lane Group Flow (vph)	116	1711	0	42	1824	0	46	253	0	91	638	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			2			4			4		
Permitted Phases	2			2			4			4		
Actuated Green, G (s)	66.6	66.6		66.6	66.6		44.0	44.0		44.0	44.0	
Effective Green, g (s)	67.0	67.0		67.0	67.0		45.0	45.0		45.0	45.0	
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.38	0.38		0.38	0.38	
Clearance Time (s)	4.4	4.4		4.4	4.4		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	63	2534		76	2516		56	606		302	597	
v/s Ratio Prot		0.38			0.40			0.16			c0.40	
v/s Ratio Perm	c1.04			0.31			0.31			0.11		
v/c Ratio	1.84	0.68		0.55	0.72		0.82	0.42		0.30	1.07	
Uniform Delay, d1	26.5	18.8		16.9	19.7		33.9	27.8		26.4	37.5	
Progression Factor	0.99	0.93		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	384.1	0.1		25.9	1.9		60.2	0.5		0.6	56.5	
Delay (s)	410.4	17.6		42.8	21.5		94.1	28.2		27.0	94.0	
Level of Service	F	B		D	C		F	C		C	F	
Approach Delay (s)		42.5			22.0			38.1			85.8	
Approach LOS		D			C			D			F	

Intersection Summary

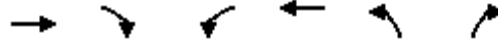
HCM Average Control Delay	40.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	106.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑	↗	↖↗	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1583	4550	3167	1417	3072	1417
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1583	4550	3167	1417	3072	1417
Volume (vph)	360	1379	1328	719	830	363
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	379	1452	1398	757	874	382
RTOR Reduction (vph)	0	0	0	6	0	5
Lane Group Flow (vph)	379	1452	1398	751	874	377
Turn Type	Prot			pm+ov		pt+ov
Protected Phases	5	2	6	4	4	4 5
Permitted Phases				6		
Actuated Green, G (s)	12.5	40.6	37.1	66.5	29.4	45.5
Effective Green, g (s)	12.0	40.5	37.0	66.0	29.0	45.0
Actuated g/C Ratio	0.13	0.45	0.41	0.73	0.32	0.50
Clearance Time (s)	3.5	3.9	3.9	3.6	3.6	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	211	2048	1302	1102	990	709
v/s Ratio Prot	c0.24	c0.32	c0.44	0.22	c0.28	0.27
v/s Ratio Perm				0.31		
v/c Ratio	1.80	0.71	1.07	0.68	0.88	0.53
Uniform Delay, d1	39.0	20.0	26.5	6.4	28.9	15.3
Progression Factor	1.00	1.00	0.60	0.36	1.00	1.00
Incremental Delay, d2	376.6	2.1	34.9	0.2	9.4	0.8
Delay (s)	415.6	22.1	50.8	2.5	38.3	16.1
Level of Service	F	C	D	A	D	B
Approach Delay (s)		103.5	33.9		31.5	
Approach LOS		F	C		C	

Intersection Summary

HCM Average Control Delay	57.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	99.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.92	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3010		1509	3018	1430	
Flt Permitted	1.00		0.13	1.00	0.98	
Satd. Flow (perm)	3010		212	3018	1430	
Volume (vph)	1504	27	48	1363	26	41
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1551	28	49	1405	27	42
RTOR Reduction (vph)	1	0	0	0	37	0
Lane Group Flow (vph)	1578	0	49	1405	32	0

Turn Type	Perm					
Protected Phases	2			6	4	
Permitted Phases			6			
Actuated Green, G (s)	80.4		80.4	80.4	11.6	
Effective Green, g (s)	79.9		79.9	79.9	12.1	
Actuated g/C Ratio	0.80		0.80	0.80	0.12	
Clearance Time (s)	3.5		3.5	3.5	4.5	
Vehicle Extension (s)	0.2		0.2	0.2	3.0	
Lane Grp Cap (vph)	2405		169	2411	173	
v/s Ratio Prot	c0.52			0.47	c0.02	
v/s Ratio Perm			0.23			
v/c Ratio	0.66		0.29	0.58	0.19	
Uniform Delay, d1	4.2		2.6	3.8	39.5	
Progression Factor	1.26		0.13	0.16	1.00	
Incremental Delay, d2	0.1		3.5	0.8	0.5	
Delay (s)	5.5		3.8	1.4	40.0	
Level of Service	A		A	A	D	
Approach Delay (s)	5.5			1.5	40.0	
Approach LOS	A			A	D	

Intersection Summary

HCM Average Control Delay	4.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	EBR2	NBT	NBR	NBR2	SBL2	SBL	SBT	NWR2
Lane Configurations											
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0					4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95					0.95	1.00
Frt	1.00	1.00	0.85	0.85	0.94					1.00	0.86
Flt Protected	0.95	1.00	1.00	1.00	1.00					0.98	1.00
Satd. Flow (prot)	1583	3167	1417	1417	2971					3099	1442
Flt Permitted	0.95	1.00	1.00	1.00	1.00					0.66	1.00
Satd. Flow (perm)	1583	3167	1417	1417	2971					2097	1442
Volume (vph)	68	1756	316	42	357	142	107	151	115	340	51
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	1951	351	47	397	158	119	168	128	378	57
RTOR Reduction (vph)	0	0	0	45	18	0	0	0	0	0	0
Lane Group Flow (vph)	76	1951	351	2	656	0	0	0	0	674	57
Turn Type	custom		Perm	Perm					Prot		Free
Protected Phases	3	3			6				2	1	
Permitted Phases	4	4	3	3						2	Free
Actuated Green, G (s)	25.0	25.0	5.0	5.0	22.5					34.9	100.0
Effective Green, g (s)	23.6	23.6	4.0	4.0	22.5					33.9	100.0
Actuated g/C Ratio	0.24	0.24	0.04	0.04	0.22					0.34	1.00
Clearance Time (s)	3.0	3.0	3.0	3.0	4.0					4.0	
Vehicle Extension (s)	1.0	1.0	1.0	1.0	3.0					4.0	
Lane Grp Cap (vph)	437	874	57	57	668					911	1442
v/s Ratio Prot	0.01	c0.09			c0.22					c0.15	
v/s Ratio Perm	0.04	0.53	c0.25	0.00						c0.10	0.04
v/c Ratio	0.17	2.23	6.16	0.03	0.98					0.74	0.04
Uniform Delay, d1	30.7	38.2	48.0	46.1	38.6					29.2	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00					0.32	1.00
Incremental Delay, d2	0.1	558.2	2358.2	0.1	30.8					4.2	0.1
Delay (s)	30.7	596.4	2406.2	46.2	69.3					13.6	0.1
Level of Service	C	F	F	D	E					B	A
Approach Delay (s)		830.0			69.3					13.6	
Approach LOS		F			E					B	

Intersection Summary

HCM Average Control Delay	540.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	103.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Appendix C-7:
Future Year 2035 Alternative 5 Level of Service Worksheets
(Including Mitigation)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↑↑	↗		↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95	1.00		0.95	1.00
Frt	1.00	0.97		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	1583	4424		1583	4539			3156	1417		3153	1417
Flt Permitted	0.10	1.00		0.95	1.00			0.68	1.00		0.62	1.00
Satd. Flow (perm)	171	4424		1583	4539			2156	1417		1969	1417
Volume (vph)	93	1475	335	61	1721	29	63	872	148	84	853	604
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	98	1553	353	64	1812	31	66	918	156	88	898	636
RTOR Reduction (vph)	0	40	0	0	2	0	0	0	81	0	0	6
Lane Group Flow (vph)	98	1866	0	64	1841	0	0	984	75	0	986	631
Turn Type	Perm		Prot		Perm		Perm	Perm	Perm	Perm		Perm
Protected Phases	6		5		2		8		4		4	
Permitted Phases	6						8		4		4	
Actuated Green, G (s)	39.0	39.0	4.0		47.0	34.5		34.5	34.5		34.5	34.5
Effective Green, g (s)	39.0	39.0	4.0		47.0	35.0		35.0	35.0		35.0	35.0
Actuated g/C Ratio	0.43	0.43	0.04		0.52	0.39		0.39	0.39		0.39	0.39
Clearance Time (s)	4.0	4.0	4.0		4.0	4.5		4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	74	1917	70		2370	838		551	766		551	
v/s Ratio Prot	0.42		0.04		c0.41	0.46		0.05	c0.50		0.45	
v/s Ratio Perm	c0.57					0.46		0.05	c0.50		0.45	
v/c Ratio	1.32	0.97	0.91		0.78	1.17		0.14	1.29		1.14	
Uniform Delay, d1	25.5	25.0	42.8		17.3	27.5		17.7	27.5		27.5	
Progression Factor	1.67	1.73	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	185.1	9.5	77.8		2.6	90.9		0.5	139.0		84.8	
Delay (s)	227.6	52.7	120.6		19.9	118.4		18.3	166.5		112.3	
Level of Service	F	D	F		B	F		B	F		F	
Approach Delay (s)	61.3		23.2		104.7		145.3					
Approach LOS	E		C		F		F					

Intersection Summary

HCM Average Control Delay	78.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	118.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: 6th St & Western Ave

2/23/2010

Page 2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔↔			↔↔	↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0			4.0			4.0	4.0
Lane Util. Factor		0.95			0.95			0.95			0.95	1.00
Frbp, ped/bikes		1.00			0.98			0.99			1.00	0.83
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		0.99			0.99			0.99			1.00	0.85
Flt Protected		1.00			1.00			1.00			1.00	1.00
Satd. Flow (prot)		3128			3077			3130			3167	1171
Flt Permitted		1.00			1.00			1.00			1.00	1.00
Satd. Flow (perm)		3128			3077			3130			3167	1171
Volume (vph)	0	1087	60	0	1092	102	0	1411	60	0	1788	112
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	1098	61	0	1103	103	0	1425	61	0	1806	113
RTOR Reduction (vph)	0	2	0	0	5	0	0	3	0	0	0	14
Lane Group Flow (vph)	0	1157	0	0	1201	0	0	1483	0	0	1806	99
Confl. Peds. (#/hr)	76		47	47		76	70		83	83		70
Confl. Bikes (#/hr)			7			7			12			9
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)		40.2			40.2			40.2			40.2	40.2
Effective Green, g (s)		41.0			41.0			41.0			41.0	41.0
Actuated g/C Ratio		0.46			0.46			0.46			0.46	0.46
Clearance Time (s)		4.8			4.8			4.8			4.8	4.8
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1425			1402			1426			1443	533
v/s Ratio Prot		0.37			c0.39			0.47			c0.57	
v/s Ratio Perm												0.08
v/c Ratio		0.81			0.86			1.04			1.25	0.19
Uniform Delay, d1		21.2			21.9			24.5			24.5	14.6
Progression Factor		1.00			1.00			0.59			1.00	1.00
Incremental Delay, d2		5.1			6.9			20.5			119.1	0.8
Delay (s)		26.3			28.8			35.0			143.6	15.3
Level of Service		C			C			C			F	B
Approach Delay (s)		26.3			28.8			35.0			136.0	
Approach LOS		C			C			C			F	

Intersection Summary			
HCM Average Control Delay	65.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	111.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↗		↖	↕↕↗		↖	↕↗		↖	↕↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4486		1583	4476		1583	3131		1583	2994	
Flt Permitted	0.14	1.00		0.14	1.00		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	230	4486		230	4476		230	3131		230	2994	
Volume (vph)	207	1320	54	170	1669	52	299	1126	27	202	1351	253
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	223	1419	58	183	1795	56	322	1211	29	217	1453	272
RTOR Reduction (vph)	0	5	0	0	3	0	0	2	0	0	17	0
Lane Group Flow (vph)	223	1472	0	183	1848	0	322	1238	0	217	1708	0
Conf. Peds. (#/hr)	529		124	124		529	153		349	349		153
Conf. Bikes (#/hr)			4			6			8			9
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	35.6	27.6		35.6	27.6		35.8	27.8		35.8	27.8	
Effective Green, g (s)	37.0	29.0		37.0	29.0		37.0	29.0		37.0	29.0	
Actuated g/C Ratio	0.41	0.32		0.41	0.32		0.41	0.32		0.41	0.32	
Clearance Time (s)	4.0	5.4		4.0	5.4		4.0	5.2		4.0	5.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	215	1445		215	1442		215	1009		215	965	
v/s Ratio Prot	c0.09	0.33		0.08	c0.41		c0.13	0.40		0.09	c0.57	
v/s Ratio Perm	0.33			0.27			0.48			0.33		
v/c Ratio	1.04	1.02		0.85	1.28		1.50	1.23		1.01	1.77	
Uniform Delay, d1	43.2	30.5		21.0	30.5		43.2	30.5		43.2	30.5	
Progression Factor	1.91	0.92		0.97	0.85		1.11	1.14		1.61	1.45	
Incremental Delay, d2	49.4	20.2		13.6	129.1		231.7	105.1		20.7	346.9	
Delay (s)	131.8	48.1		34.0	154.9		279.6	139.9		90.1	391.1	
Level of Service	F	D		C	F		F	F		F	F	
Approach Delay (s)		59.1			144.0			168.7			357.4	
Approach LOS		E			F			F			F	

Intersection Summary

HCM Average Control Delay	186.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	134.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.96		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3117		1583	3039		1583	3158		1583	3157	
Flt Permitted	0.29	1.00		0.27	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	475	3117		456	3039		159	3158		159	3157	
Volume (vph)	57	599	70	64	474	174	42	1334	25	115	1573	34
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	64	673	79	72	533	196	47	1499	28	129	1767	38
RTOR Reduction (vph)	0	3	0	0	7	0	0	2	0	0	2	0
Lane Group Flow (vph)	64	749	0	72	722	0	47	1525	0	129	1803	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	8			4			6			2		
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	39.4	39.4		39.4	39.4		41.3	41.3		41.3	41.3	
Effective Green, g (s)	40.0	40.0		40.0	40.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio	0.44	0.44		0.44	0.44		0.47	0.47		0.47	0.47	
Clearance Time (s)	4.6	4.6		4.6	4.6		4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	211	1385		203	1351		74	1474		74	1473	
v/s Ratio Prot	c0.24			0.24			0.48			0.57		
v/s Ratio Perm	0.13			0.16			0.30			c0.81		
v/c Ratio	0.30	0.54		0.35	0.53		0.64	1.03		1.74	1.22	
Uniform Delay, d1	16.1	18.3		16.5	18.2		18.2	24.0		24.0	24.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.67	0.67	
Incremental Delay, d2	3.7	1.5		4.8	1.5		34.9	33.0		339.5	101.5	
Delay (s)	19.7	19.8		21.3	19.7		53.1	57.0		355.5	117.7	
Level of Service	B			C			D			E		
Approach Delay (s)	19.8			19.9			56.8			133.6		
Approach LOS	B			B			E			F		

Intersection Summary

HCM Average Control Delay	74.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↗↖↗	↖	↖	↗↖↗	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4523		1583	4501		1583	3167	1417	1583	3167	1417
Flt Permitted	0.11	1.00		0.12	1.00		0.12	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	186	4523		192	4501		197	3167	1417	187	3167	1417
Volume (vph)	71	1914	78	75	1760	137	93	1104	52	163	1340	141
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	73	1973	80	77	1814	141	96	1138	54	168	1381	145
RTOR Reduction (vph)	0	4	0	0	8	0	0	0	21	0	0	44
Lane Group Flow (vph)	73	2049	0	77	1947	0	96	1138	33	168	1381	101
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases	6			2			8		8	4		4
Actuated Green, G (s)	42.3	34.9		39.9	33.7		39.2	32.9	39.1	42.6	34.6	42.0
Effective Green, g (s)	43.3	35.9		40.9	34.7		40.2	33.9	40.1	43.6	35.6	43.0
Actuated g/C Ratio	0.43	0.36		0.41	0.35		0.40	0.34	0.40	0.44	0.36	0.43
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	184	1624		165	1562		167	1074	625	193	1127	666
v/s Ratio Prot	c0.03	c0.45		0.03	0.43		0.04	0.36	0.00	c0.07	c0.44	0.01
v/s Ratio Perm	0.14			0.16			0.20		0.02	0.31		0.06
v/c Ratio	0.40	1.26		0.47	1.25		0.57	1.06	0.05	0.87	1.23	0.15
Uniform Delay, d1	23.3	32.0		24.4	32.6		24.8	33.0	18.3	23.2	32.2	17.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	122.9		2.1	116.3		4.7	44.7	0.0	32.0	109.5	0.1
Delay (s)	24.7	155.0		26.5	149.0		29.5	77.7	18.4	55.2	141.7	17.5
Level of Service	C	F		C	F		C	E	B	E	F	B
Approach Delay (s)		150.5			144.3			71.7			122.5	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	127.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4515		1583	4514		1583	3136		1583	3075	
Flt Permitted	0.09	1.00		0.09	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	152	4515		152	4514		175	3136		176	3075	
Volume (vph)	202	1764	94	148	2108	116	119	1011	70	90	1251	300
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	213	1857	99	156	2219	122	125	1064	74	95	1317	316
RTOR Reduction (vph)	0	7	0	0	7	0	0	3	0	0	1	0
Lane Group Flow (vph)	213	1949	0	156	2334	0	125	1135	0	95	1632	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	6			2			8			4		
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	43.5	43.5		43.5	43.5		37.5	37.5		37.5	37.5	
Effective Green, g (s)	44.0	44.0		44.0	44.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.49	0.49		0.49	0.49		0.42	0.42		0.42	0.42	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	2207		74	2207		74	1324		74	1298	
v/s Ratio Prot		0.43			0.52			0.36			0.53	
v/s Ratio Perm	c1.41			1.03			c0.71			0.54		
v/c Ratio	2.88	0.88		2.11	1.06		1.69	0.86		1.28	1.26	
Uniform Delay, d1	23.0	20.7		23.0	23.0		26.0	23.5		26.0	26.0	
Progression Factor	1.45	1.49		1.14	1.14		1.00	1.00		1.00	1.00	
Incremental Delay, d2	867.0	3.5		502.8	27.2		361.3	7.3		198.5	122.2	
Delay (s)	900.3	34.3		528.9	53.5		387.3	30.8		224.5	148.2	
Level of Service	F	C		F	D		F	C		F	F	
Approach Delay (s)		119.3			83.2			66.1			152.4	
Approach LOS		F			F			E			F	

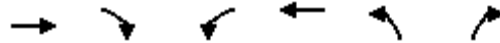
Intersection Summary

HCM Average Control Delay	106.2	HCM Level of Service	F
HCM Volume to Capacity ratio	2.32		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	131.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↑	↗		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	0.99			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		1.00	
Satd. Flow (prot)	1583	4535		1583	4527			1638	1417		1575	
Flt Permitted	0.07	1.00		0.07	1.00			0.64	1.00		0.97	
Satd. Flow (perm)	110	4535		110	4527			1075	1417		1538	
Volume (vph)	31	1899	42	101	2439	87	66	123	123	13	112	78
Peak-hour factor, PHF	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Adj. Flow (vph)	39	2404	53	128	3087	110	84	156	156	16	142	99
RTOR Reduction (vph)	0	2	0	0	3	0	0	0	2	0	1	0
Lane Group Flow (vph)	39	2455	0	128	3194	0	0	240	154	0	256	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	6		2		2		8		8		4	
Permitted Phases	6		2		8		8		4			
Actuated Green, G (s)	60.5	60.5		60.5	60.5			21.0	21.0		21.0	
Effective Green, g (s)	60.5	60.5		60.5	60.5			21.5	21.5		21.5	
Actuated g/C Ratio	0.67	0.67		0.67	0.67			0.24	0.24		0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.5	4.5		4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	74	3049		74	3043			257	339		367	
v/s Ratio Prot		0.54			0.71							
v/s Ratio Perm	0.35			c1.16				c0.22	0.11		0.17	
v/c Ratio	0.53	0.81		1.73	1.05			0.93	0.45		0.70	
Uniform Delay, d1	7.5	10.5		14.8	14.8			33.6	29.2		31.3	
Progression Factor	1.00	1.00		1.12	1.15			1.00	1.00		1.00	
Incremental Delay, d2	24.3	2.4		351.7	26.8			38.4	1.0		5.7	
Delay (s)	31.8	12.9		368.2	43.7			71.9	30.2		37.0	
Level of Service	C	B		F	D			E	C		D	
Approach Delay (s)		13.2			56.2			55.5			37.0	
Approach LOS		B			E			E			D	

Intersection Summary			
HCM Average Control Delay	38.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵↵↵	↵
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.91
Frbp, ped/bikes	0.97		1.00	1.00	0.95	0.89
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	0.96	0.85
Flt Protected	1.00		0.95	1.00	0.96	1.00
Satd. Flow (prot)	4325		1583	4550	2859	1147
Flt Permitted	1.00		0.09	1.00	0.96	1.00
Satd. Flow (perm)	4325		148	4550	2859	1147
Volume (vph)	1389	265	603	1838	642	627
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1447	276	628	1915	669	653
RTOR Reduction (vph)	30	0	0	0	42	2
Lane Group Flow (vph)	1693	0	628	1915	865	413
Conf. Peds. (#/hr)		153	153			100
Conf. Bikes (#/hr)						2
Turn Type			pm+pt		pm+ov	
Protected Phases	6		5	2	4	5
Permitted Phases			2			4
Actuated Green, G (s)	40.0		52.0	52.0	28.3	36.3
Effective Green, g (s)	41.0		53.0	53.0	29.0	37.0
Actuated g/C Ratio	0.46		0.59	0.59	0.32	0.41
Clearance Time (s)	5.0		4.0	5.0	4.7	4.0
Vehicle Extension (s)	3.0		2.0	3.0	2.0	2.0
Lane Grp Cap (vph)	1970		215	2679	921	523
v/s Ratio Prot	0.39		c0.26	0.42	c0.30	0.07
v/s Ratio Perm			c1.46			0.29
v/c Ratio	0.86		2.92	0.71	0.94	0.79
Uniform Delay, d1	21.9		23.7	13.1	29.6	23.1
Progression Factor	1.00		1.00	1.00	0.43	0.27
Incremental Delay, d2	5.2		877.0	1.7	13.7	5.7
Delay (s)	27.1		900.7	14.8	26.3	11.9
Level of Service	C		F	B	C	B
Approach Delay (s)	27.1			233.6	21.7	
Approach LOS	C			F	C	

Intersection Summary

HCM Average Control Delay	119.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.17		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗	↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3144		1583	1667	1417	1583	3111		1583	3163	
Flt Permitted	0.40	1.00		0.47	1.00	1.00	0.29	1.00		0.14	1.00	
Satd. Flow (perm)	667	3144		783	1667	1417	480	3111		232	3163	
Volume (vph)	7	328	16	212	283	105	135	1119	150	26	806	7
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	7	342	17	221	295	109	141	1166	156	27	840	7
RTOR Reduction (vph)	0	0	0	0	0	60	0	12	0	0	1	0
Lane Group Flow (vph)	7	359	0	221	295	49	141	1310	0	27	846	0
Turn Type	Perm			Perm			Perm	Perm		Perm		
Protected Phases	8			4			6			2		
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	26.4	26.4		26.4	26.4	26.4	54.3	54.3		54.3	54.3	
Effective Green, g (s)	27.0	27.0		27.0	27.0	27.0	55.0	55.0		55.0	55.0	
Actuated g/C Ratio	0.30	0.30		0.30	0.30	0.30	0.61	0.61		0.61	0.61	
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	200	943		235	500	425	293	1901		142	1933	
v/s Ratio Prot		0.11			0.18			c0.42			0.27	
v/s Ratio Perm	0.01			c0.28		0.03	0.29			0.12		
v/c Ratio	0.04	0.38		0.94	0.59	0.11	0.48	0.69		0.19	0.44	
Uniform Delay, d1	22.3	24.9		30.7	26.8	22.8	9.6	11.8		7.7	9.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.68	1.88		0.22	0.31	
Incremental Delay, d2	0.3	1.2		45.1	5.0	0.5	0.5	0.2		0.3	0.1	
Delay (s)	22.6	26.1		75.8	31.8	23.4	16.7	22.3		2.0	3.0	
Level of Service	C	C		E	C	C	B	C		A	A	
Approach Delay (s)		26.0			45.9			21.8			3.0	
Approach LOS		C			D			C			A	

Intersection Summary

HCM Average Control Delay	21.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕↕↕		↗	↕↕↕		↗	↕↕		↗	↕↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Fr _t	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.85
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4490		1583	4536		1583	3146		1583	3167	1417
Fl _t Permitted	0.15	1.00		0.95	1.00		0.13	1.00		0.15	1.00	1.00
Satd. Flow (perm)	248	4490		1583	4536		222	3146		256	3167	1417
Volume (vph)	68	1683	161	140	2669	55	178	1269	58	56	1112	151
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	75	1849	177	154	2933	60	196	1395	64	62	1222	166
RTOR Reduction (vph)	0	13	0	0	2	0	0	3	0	0	0	114
Lane Group Flow (vph)	75	2013	0	154	2991	0	196	1456	0	62	1222	52
Turn Type	pm+pt			Prot			pm+pt			pm+pt		Perm
Protected Phases	5	2		1	6		7	4		3	8	8
Permitted Phases	2						4			8		8
Actuated Green, G (s)	31.3	26.0		11.1	30.9		39.5	29.5		31.0	25.0	25.0
Effective Green, g (s)	32.6	26.9		10.6	31.8		40.5	30.5		32.0	26.0	26.0
Actuated g/C Ratio	0.36	0.30		0.12	0.35		0.45	0.34		0.36	0.29	0.29
Clearance Time (s)	4.4	4.9		3.5	4.9		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	174	1342		186	1603		259	1066		179	915	409
v/s Ratio Prot	0.03	0.45		c0.10	c0.66		c0.09	c0.46		0.02	0.39	
v/s Ratio Perm	0.13						0.25			0.10		0.04
v/c Ratio	0.43	1.50		0.83	1.87		0.76	1.37		0.35	1.34	0.13
Uniform Delay, d ₁	23.2	31.6		38.8	29.1		40.1	29.8		40.8	32.0	23.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.86	0.78	0.50
Incremental Delay, d ₂	1.7	229.1		25.1	392.1		11.9	170.6		1.1	158.0	0.6
Delay (s)	24.9	260.6		63.9	421.2		52.0	200.3		36.2	182.9	12.4
Level of Service	C			E			D			D		B
Approach Delay (s)	252.2			403.7			182.8			157.1		
Approach LOS	F			F			F			F		

Intersection Summary

HCM Average Control Delay	279.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	122.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↑	↗		↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.99	1.00
Satd. Flow (prot)	1583	4523		1583	4533			1627	1417		1651	1417
Flt Permitted	0.09	1.00		0.09	1.00			0.98	1.00		0.99	1.00
Satd. Flow (perm)	147	4523		147	4533			1627	1417		1651	1417
Volume (vph)	22	1567	64	46	2227	55	142	150	20	34	149	40
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	1615	66	47	2296	57	146	155	21	35	154	41
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	16	0	0	36
Lane Group Flow (vph)	23	1681	0	47	2350	0	0	301	5	0	189	5
Turn Type	Perm		Perm		Split		Perm		Split		Perm	
Protected Phases	6		2		4		4		3		3	
Permitted Phases	6		2				4				3	
Actuated Green, G (s)	43.6	43.6		43.6	43.6			19.0	19.0		10.5	10.5
Effective Green, g (s)	45.5	45.5		45.5	45.5			20.5	20.5		12.0	12.0
Actuated g/C Ratio	0.51	0.51		0.51	0.51			0.23	0.23		0.13	0.13
Clearance Time (s)	5.9	5.9		5.9	5.9			5.5	5.5		5.5	5.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	74	2287		74	2292			371	323		220	189
v/s Ratio Prot		0.37			c0.52			c0.18			c0.11	
v/s Ratio Perm	0.16			0.32				0.00				0.00
v/c Ratio	0.31	0.74		0.64	1.03			0.81	0.01		0.86	0.03
Uniform Delay, d1	13.1	17.5		16.2	22.2			32.9	26.9		38.2	33.9
Progression Factor	0.67	0.56		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	7.6	1.5		34.9	25.6			12.6	0.0		26.7	0.1
Delay (s)	16.4	11.3		51.1	47.8			45.6	26.9		64.9	34.0
Level of Service	B	B		D	D			D	C		E	C
Approach Delay (s)		11.4			47.9			44.3			59.4	
Approach LOS		B			D			D			E	

Intersection Summary

HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.98			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.97	1.00
Satd. Flow (prot)	1583	4544		1583	4479			1626			1612	1417
Flt Permitted	0.10	1.00		0.12	1.00			0.99			0.97	1.00
Satd. Flow (perm)	159	4544		197	4479			1626			1612	1417
Volume (vph)	91	1343	12	16	2049	239	41	132	20	276	128	314
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	93	1370	12	16	2091	244	42	135	20	282	131	320
RTOR Reduction (vph)	0	1	0	0	16	0	0	4	0	0	0	100
Lane Group Flow (vph)	93	1381	0	16	2319	0	0	193	0	0	413	220
Turn Type	Perm		Perm		Split		Split		Split		Perm	
Protected Phases	6		2		3		3		4		4	
Permitted Phases	6		2								4	
Actuated Green, G (s)	40.3	40.3		40.3	40.3			9.6			24.2	24.2
Effective Green, g (s)	41.8	41.8		41.8	41.8			11.0			25.2	25.2
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.12			0.28	0.28
Clearance Time (s)	5.5	5.5		5.5	5.5			5.4			5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	74	2110		91	2080			199			451	397
v/s Ratio Prot		0.30			0.52			c0.12			c0.26	
v/s Ratio Perm	c0.58			0.08								0.16
v/c Ratio	1.26	0.65		0.18	1.12			0.97			0.92	0.55
Uniform Delay, d1	24.1	18.5		14.1	24.1			39.3			31.4	27.6
Progression Factor	1.00	1.00		1.41	1.18			1.00			1.00	1.00
Incremental Delay, d2	188.5	1.6		0.9	53.6			53.9			23.1	1.7
Delay (s)	212.6	20.1		20.7	82.1			93.3			54.5	29.3
Level of Service	F	C		C	F			F			D	C
Approach Delay (s)		32.3			81.7			93.3			43.5	
Approach LOS		C			F			F			D	

Intersection Summary

HCM Average Control Delay	60.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: Wilshire Blvd & Sycamore Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑↑↑		↑	↑↑↑			↑			↑		
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0		
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00		
Frbp, ped/bikes		1.00		1.00	1.00			0.99			0.99		
Flpb, ped/bikes		1.00		0.99	1.00			1.00			1.00		
Frt		0.99		1.00	1.00			0.94			0.96		
Flt Protected		1.00		0.95	1.00			0.98			1.00		
Satd. Flow (prot)		4237		1477	4264			1428			1483		
Flt Permitted		1.00		0.14	1.00			0.72			0.98		
Satd. Flow (perm)		4237		224	4264			1054			1457		
Volume (vph)	0	1361	58	53	2001	37	50	21	51	10	96	52	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	0	1448	62	56	2129	39	53	22	54	11	102	55	
RTOR Reduction (vph)	0	3	0	0	1	0	0	25	0	0	5	0	
Lane Group Flow (vph)	0	1507	0	56	2167	0	0	104	0	0	163	0	
Conf. Peds. (#/hr)	25		36	36		25	8		5	5		8	
Conf. Bikes (#/hr)			5			4							
Turn Type				Perm		Perm			Perm				
Protected Phases		6			2			8			4		
Permitted Phases				2			8			4			
Actuated Green, G (s)		66.5		66.5	66.5			16.0			16.0		
Effective Green, g (s)		66.0		66.0	66.0			16.0			16.0		
Actuated g/C Ratio		0.73		0.73	0.73			0.18			0.18		
Clearance Time (s)		3.5		3.5	3.5			4.0			4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0		
Lane Grp Cap (vph)		3107		164	3127			187			259		
v/s Ratio Prot		0.36			c0.51								
v/s Ratio Perm				0.25				0.10			c0.11		
v/c Ratio		0.48		0.34	0.69			0.55			0.63		
Uniform Delay, d1		5.0		4.3	6.5			33.7			34.3		
Progression Factor		0.38		1.00	1.00			1.00			1.00		
Incremental Delay, d2		0.0		5.6	1.3			3.5			4.7		
Delay (s)		2.0		9.9	7.8			37.3			39.0		
Level of Service		A		A	A			D			D		
Approach Delay (s)		2.0			7.8			37.3			39.0		
Approach LOS		A			A			D			D		
Intersection Summary													
HCM Average Control Delay			7.9									HCM Level of Service	A
HCM Volume to Capacity ratio			0.68										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			79.4%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕↕	↗	↔	↕↕		↔	↕↕↕		↔	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2980	1333	1490	2978		1490	4264		1490	4213	
Flt Permitted	0.13	1.00	1.00	0.12	1.00		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	202	2980	1333	193	2978		216	4264		213	4213	
Volume (vph)	69	982	92	189	1678	8	90	1690	49	153	2167	260
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	73	1034	97	199	1766	8	95	1779	52	161	2281	274
RTOR Reduction (vph)	0	0	15	0	1	0	0	3	0	0	16	0
Lane Group Flow (vph)	73	1034	82	199	1773	0	95	1828	0	161	2539	0
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases	8		8	4			6			2		
Actuated Green, G (s)	35.5	30.0	36.5	38.5	31.5		34.5	28.0		35.5	28.5	
Effective Green, g (s)	36.5	31.0	37.5	39.5	32.5		35.5	29.0		36.5	29.5	
Actuated g/C Ratio	0.41	0.34	0.42	0.44	0.36		0.39	0.32		0.41	0.33	
Clearance Time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	4.8	3.0	3.0	4.6		3.0	4.3		3.0	5.5	
Lane Grp Cap (vph)	161	1026	615	186	1075		177	1374		186	1381	
v/s Ratio Prot	0.03	0.35	0.01	c0.08	c0.60		0.04	0.43		c0.07	c0.60	
v/s Ratio Perm	0.16		0.05	0.39			0.17			0.28		
v/c Ratio	0.45	1.01	0.13	1.07	1.65		0.54	1.33		0.87	1.84	
Uniform Delay, d1	41.7	29.5	16.2	20.8	28.8		41.4	30.5		42.9	30.2	
Progression Factor	0.59	0.73	0.56	1.00	1.00		1.54	0.36		1.79	1.50	
Incremental Delay, d2	1.3	24.1	0.1	85.8	296.5		0.3	149.0		4.1	377.5	
Delay (s)	26.1	45.5	9.1	106.6	325.3		64.1	160.1		81.0	422.8	
Level of Service	C	D	A	F	F		E	F		F	F	
Approach Delay (s)		41.4			303.2			155.4			402.6	
Approach LOS		D			F			F			F	

Intersection Summary			
HCM Average Control Delay	261.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	135.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘	↑↑↗		↘	↑↑↗	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2980	1333	1490	2970		1490	4253		1490	4280	
Flt Permitted	0.11	1.00	1.00	0.10	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	179	2980	1333	161	2970		161	4253		161	4280	
Volume (vph)	27	1075	168	148	1501	34	76	1939	93	76	2233	10
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	28	1097	171	151	1532	35	78	1979	95	78	2279	10
RTOR Reduction (vph)	0	0	9	0	1	0	0	6	0	0	1	0
Lane Group Flow (vph)	28	1097	162	151	1566	0	78	2068	0	78	2288	0
Turn Type	Perm		Perm	pm+pt		Perm		Perm		Perm		
Protected Phases		8		7	4		6		6		2	
Permitted Phases	8		8	4		6		2				
Actuated Green, G (s)	34.0	34.0	34.0	42.0	42.0	38.0	38.0	38.0	38.0	38.0	38.0	
Effective Green, g (s)	35.0	35.0	35.0	43.0	43.0	39.0	39.0	39.0	39.0	39.0	39.0	
Actuated g/C Ratio	0.39	0.39	0.39	0.48	0.48	0.43	0.43	0.43	0.43	0.43	0.43	
Clearance Time (s)	5.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	70	1159	518	136	1419	70	1843		70	1855		
v/s Ratio Prot		0.37		0.05	c0.53		0.49				c0.53	
v/s Ratio Perm	0.16		0.12	c0.48		0.48		0.48		0.48		
v/c Ratio	0.40	0.95	0.31	1.11	1.10	1.11	1.12	1.11	1.23	1.11	1.23	
Uniform Delay, d1	19.9	26.6	19.1	21.7	23.5	25.5	25.5	25.5	25.5	25.5	25.5	
Progression Factor	0.83	0.89	0.77	1.00	1.00	1.00	1.00	1.00	2.01	1.99	1.99	
Incremental Delay, d2	11.6	12.7	1.1	109.8	57.5	142.1	62.9	68.4	105.6	68.4	105.6	
Delay (s)	28.1	36.4	15.9	131.5	81.0	167.6	88.4	119.7	156.4	119.7	156.4	
Level of Service	C	D	B	F	F	F	F	F	F	F	F	
Approach Delay (s)		33.5			85.5		91.2		155.2			
Approach LOS		C			F		F		F		F	

Intersection Summary

HCM Average Control Delay	100.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	132.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕↕		↕	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.91		1.00	0.91	
Frt		0.99			0.99		1.00	1.00		1.00	0.99	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2943			2942		1490	4276		1490	4240	
Flt Permitted		1.00			1.00		0.19	1.00		0.19	1.00	
Satd. Flow (perm)		2943			2942		300	4276		300	4240	
Volume (vph)	0	734	67	0	1214	115	59	1964	21	194	2154	150
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	741	68	0	1226	116	60	1984	21	196	2176	152
RTOR Reduction (vph)	0	0	0	0	0	0	0	2	0	0	12	0
Lane Group Flow (vph)	0	809	0	0	1342	0	60	2003	0	196	2316	0
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		30.2			30.2		20.2	20.2		20.2	20.2	
Effective Green, g (s)		31.1			31.1		20.9	20.9		20.9	20.9	
Actuated g/C Ratio		0.52			0.52		0.35	0.35		0.35	0.35	
Clearance Time (s)		4.9			4.9		4.7	4.7		4.7	4.7	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1525			1525		105	1489		105	1477	
v/s Ratio Prot		0.27			c0.46			0.47			0.55	
v/s Ratio Perm							0.20			c0.65		
v/c Ratio		0.53			0.88		0.57	1.35		1.87	1.57	
Uniform Delay, d1		9.6			12.8		15.9	19.6		19.6	19.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4			6.3		20.6	159.9		424.0	258.8	
Delay (s)		10.0			19.1		36.6	179.5		443.5	278.4	
Level of Service		A			B		D	F		F	F	
Approach Delay (s)		10.0			19.1			175.3			291.2	
Approach LOS		A			B			F			F	

Intersection Summary

HCM Average Control Delay	167.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	115.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑↑		↖	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	4115		1489	4241		1490	4227		1490	4147	
Flt Permitted	0.13	1.00		0.13	1.00		0.12	1.00		0.95	1.00	
Satd. Flow (perm)	209	4115		199	4241		196	4227		1490	4147	
Volume (vph)	97	1218	186	134	1852	68	140	1802	109	211	1703	237
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	98	1230	188	135	1871	69	141	1820	110	213	1720	239
RTOR Reduction (vph)	0	23	0	0	5	0	0	7	0	0	20	0
Lane Group Flow (vph)	98	1395	0	135	1935	0	141	1923	0	213	1939	0
Conf. Peds. (#/hr)	96		120	120		96	89		58	58		89
Conf. Bikes (#/hr)			8			5			3			4
Turn Type	pm+pt		pm+pt		pm+pt		Prot					
Protected Phases	1	6	5	2	3	8	7	4				
Permitted Phases	6		2		8							
Actuated Green, G (s)	34.0	30.0	37.0	31.5	37.0	32.0	7.5	34.5				
Effective Green, g (s)	33.5	30.0	36.5	31.5	36.5	32.0	7.0	34.5				
Actuated g/C Ratio	0.37	0.33	0.41	0.35	0.41	0.36	0.08	0.38				
Clearance Time (s)	3.5	4.0	3.5	4.0	3.5	4.0	3.5	4.0				
Vehicle Extension (s)	3.0	4.0	3.0	4.0	3.0	4.0	2.0	4.0				
Lane Grp Cap (vph)	128	1372	152	1484	144	1503	116	1590				
v/s Ratio Prot	0.03	0.34	c0.05	c0.46	0.05	0.45	c0.14	c0.47				
v/s Ratio Perm	0.26		0.31		0.35							
v/c Ratio	0.77	1.02	0.89	1.30	0.98	1.28	1.84	1.22				
Uniform Delay, d1	44.5	30.0	21.9	29.2	26.5	29.0	41.5	27.8				
Progression Factor	1.20	0.70	1.14	0.81	1.55	0.84	1.00	1.00				
Incremental Delay, d2	22.2	27.9	32.9	140.5	50.0	128.8	407.7	104.8				
Delay (s)	75.7	48.9	57.8	164.1	91.0	153.0	449.2	132.5				
Level of Service	E	D	E	F	F	F	F	F				
Approach Delay (s)		50.7		157.2		148.8		163.6				
Approach LOS		D		F		F		F				

Intersection Summary

HCM Average Control Delay	136.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	122.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕↕		↕	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.94			0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1452			1512		1490	4271		1490	4267	
Flt Permitted		0.93			0.90		0.07	1.00		0.07	1.00	
Satd. Flow (perm)		1367			1374		117	4271		117	4267	
Volume (vph)	20	60	59	79	203	48	76	1969	27	9	2000	39
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	21	62	61	81	209	49	78	2030	28	9	2062	40
RTOR Reduction (vph)	0	1	0	0	1	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	143	0	0	338	0	78	2057	0	9	2100	0
Conf. Peds. (#/hr)	6		10	10		6	21		10	10		5
Conf. Bikes (#/hr)			2			2			2			
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		27.5			27.5		53.0	53.0		53.0	53.0	
Effective Green, g (s)		28.5			28.5		53.5	53.5		53.5	53.5	
Actuated g/C Ratio		0.32			0.32		0.59	0.59		0.59	0.59	
Clearance Time (s)		5.0			5.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		433			435		70	2539		70	2536	
v/s Ratio Prot								0.48			0.49	
v/s Ratio Perm		0.10			c0.25		c0.67			0.08		
v/c Ratio		0.33			0.78		1.11	0.81		0.13	0.83	
Uniform Delay, d1		23.5			27.9		18.2	14.3		8.0	14.6	
Progression Factor		1.00			1.00		1.00	1.00		0.59	0.61	
Incremental Delay, d2		0.4			8.4		142.1	2.9		0.3	0.3	
Delay (s)		23.9			36.3		160.4	17.2		5.1	9.2	
Level of Service		C			D		F	B		A	A	
Approach Delay (s)		23.9			36.3			22.4			9.2	
Approach LOS		C			D			C			A	
Intersection Summary												
HCM Average Control Delay			17.6				HCM Level of Service			B		
HCM Volume to Capacity ratio			1.00									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			93.4%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑↑		↖	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	4255		1490	4254		1490	4272		1490	4224	
Flt Permitted	0.12	1.00		0.11	1.00		0.95	1.00		0.12	1.00	
Satd. Flow (perm)	189	4255		169	4254		1490	4272		190	4224	
Volume (vph)	111	1378	60	94	1729	81	98	1913	31	150	1958	195
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	118	1466	64	100	1839	86	104	2035	33	160	2083	207
RTOR Reduction (vph)	0	5	0	0	5	0	0	1	0	0	11	0
Lane Group Flow (vph)	118	1525	0	100	1920	0	104	2067	0	160	2279	0
Turn Type	Perm		pm+pt			Prot		pm+pt				
Protected Phases	8		7		4		5		1			6
Permitted Phases	8		4					2		6		
Actuated Green, G (s)	31.8	31.8	43.6		43.6		10.0	29.4	43.8		31.6	
Effective Green, g (s)	33.2	33.2	45.0		45.0		10.0	30.8	45.2		33.0	
Actuated g/C Ratio	0.33	0.33	0.45		0.45		0.10	0.31	0.45		0.33	
Clearance Time (s)	5.4	5.4	4.0		5.4		4.0	5.4	4.0		5.4	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	4.0		3.0	
Lane Grp Cap (vph)	63	1413	179		1914		149	1316	244		1394	
v/s Ratio Prot	0.36		0.04		c0.45		0.07		c0.08		c0.54	
v/s Ratio Perm	c0.62		0.21					0.48		0.22		
v/c Ratio	1.87	1.08	0.56		1.00		0.70	1.57	0.66		1.63	
Uniform Delay, d1	33.4	33.4	21.3		27.5		43.5	34.6	22.3		33.5	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	446.8	48.5	3.7		21.3		13.3	260.4	6.9		288.9	
Delay (s)	480.2	81.9	25.1		48.8		56.9	295.0	29.1		322.4	
Level of Service	F		C			D		E		F		C
Approach Delay (s)	110.4					47.7		283.6		303.2		
Approach LOS	F					D		F		F		

Intersection Summary

HCM Average Control Delay	197.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	120.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑			↑↑↑			↑	↗		↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91			0.91			1.00	1.00		1.00	
Frbp, ped/bikes	1.00	1.00			0.99			1.00	0.97		0.98	
Flpb, ped/bikes	0.99	1.00			1.00			1.00	1.00		0.99	
Frt	1.00	1.00			1.00			1.00	0.85		0.95	
Flt Protected	0.95	1.00			1.00			0.99	1.00		0.98	
Satd. Flow (prot)	1477	4247			4206			1555	1287		1416	
Flt Permitted	0.06	1.00			1.00			0.96	1.00		0.82	
Satd. Flow (perm)	98	4247			4206			1496	1287		1191	
Volume (vph)	83	1194	34	0	2070	71	12	76	35	81	29	74
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	86	1231	35	0	2134	73	12	78	36	84	30	76
RTOR Reduction (vph)	0	2	0	0	3	0	0	0	28	0	2	0
Lane Group Flow (vph)	86	1264	0	0	2204	0	0	90	8	0	188	0
Conf. Peds. (#/hr)	151		56	56		151	25		19	19		25
Conf. Bikes (#/hr)			4			7			1			1
Turn Type	Perm			Perm			Perm		Perm		Perm	
Protected Phases	6			2			8		8		4	
Permitted Phases	6						8		8		4	
Actuated Green, G (s)	63.7	63.7			63.7			18.8	18.8		18.8	
Effective Green, g (s)	63.2	63.2			63.2			18.8	18.8		18.8	
Actuated g/C Ratio	0.70	0.70			0.70			0.21	0.21		0.21	
Clearance Time (s)	3.5	3.5			3.5			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	69	2982			2954			312	269		249	
v/s Ratio Prot		0.30			0.52							
v/s Ratio Perm	c0.87						0.06		0.01		c0.16	
v/c Ratio	1.25	0.42			0.75			0.29	0.03		0.75	
Uniform Delay, d1	13.4	5.7			8.4			30.0	28.3		33.4	
Progression Factor	1.52	1.23			0.84			1.00	1.00		1.00	
Incremental Delay, d2	173.4	0.3			0.2			0.5	0.0		12.1	
Delay (s)	193.8	7.3			7.2			30.5	28.4		45.6	
Level of Service	F	A			A			C	C		D	
Approach Delay (s)		19.2			7.2			29.9			45.6	
Approach LOS		B			A			C			D	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑	↗		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.86	0.86		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.94			0.94	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.99	
Satd. Flow (prot)	1583	4543		1583	4300	1218		1557			1559	
Flt Permitted	0.08	1.00		0.14	1.00	1.00		0.89			0.72	
Satd. Flow (perm)	128	4543		232	4300	1218		1397			1127	
Volume (vph)	44	1217	12	63	1786	126	26	174	171	102	249	254
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	51	1399	14	72	2053	145	30	200	197	117	286	292
RTOR Reduction (vph)	0	1	0	0	0	61	0	28	0	0	5	0
Lane Group Flow (vph)	51	1412	0	72	2053	84	0	399	0	0	690	0
Turn Type	Perm			Perm			Perm	Perm			Perm	
Protected Phases	6			2			2	8			4	
Permitted Phases	6			2			2	8			4	
Actuated Green, G (s)	52.0	52.0		52.0	52.0	52.0		30.0			30.0	
Effective Green, g (s)	52.0	52.0		52.0	52.0	52.0		30.0			30.0	
Actuated g/C Ratio	0.58	0.58		0.58	0.58	0.58		0.33			0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	74	2625		134	2484	704		466			376	
v/s Ratio Prot	0.31			c0.48								
v/s Ratio Perm	0.40			0.31		0.07		0.29			c0.61	
v/c Ratio	0.69	0.54		0.54	0.83	0.12		0.86			1.83	
Uniform Delay, d1	13.3	11.6		11.6	15.4	8.6		28.0			30.0	
Progression Factor	1.98	2.17		0.98	1.04	1.27		1.00			1.00	
Incremental Delay, d2	39.4	0.7		9.9	2.2	0.2		14.3			385.6	
Delay (s)	65.8	26.0		21.4	18.2	11.2		42.3			415.6	
Level of Service	E	C		C	B	B		D			F	
Approach Delay (s)	27.4			17.9				42.3			415.6	
Approach LOS	C			B				D			F	

Intersection Summary

HCM Average Control Delay	79.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	123.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	1.00		1.00	1.00	0.90	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	4538		1583	4550	1486	
Flt Permitted	1.00		0.17	1.00	0.99	
Satd. Flow (perm)	4538		292	4550	1486	
Volume (vph)	1191	22	106	2165	11	28
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1254	23	112	2279	12	29
RTOR Reduction (vph)	2	0	0	0	20	0
Lane Group Flow (vph)	1275	0	112	2279	21	0
Turn Type			Perm			
Protected Phases	6			2	8	
Permitted Phases			2			
Actuated Green, G (s)	54.8		54.8	54.8	26.0	
Effective Green, g (s)	55.3		55.3	55.3	26.7	
Actuated g/C Ratio	0.61		0.61	0.61	0.30	
Clearance Time (s)	4.5		4.5	4.5	4.7	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2788		179	2796	441	
v/s Ratio Prot	0.28			c0.50	c0.01	
v/s Ratio Perm			0.38			
v/c Ratio	0.46		0.63	0.82	0.05	
Uniform Delay, d1	9.3		10.9	13.4	22.6	
Progression Factor	1.00		1.22	1.33	1.00	
Incremental Delay, d2	0.5		5.5	0.9	0.0	
Delay (s)	9.8		18.8	18.8	22.6	
Level of Service	A		B	B	C	
Approach Delay (s)	9.8			18.8	22.6	
Approach LOS	A			B	C	

Intersection Summary

HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	3167	1417	1583	3167	1417	1583	3167	1417	1583	3127	3127
Flt Permitted	0.12	1.00	1.00	0.12	1.00	1.00	0.14	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	208	3167	1417	195	3167	1417	238	3167	1417	208	3127	3127
Volume (vph)	54	925	104	228	1542	147	87	953	111	133	1378	126
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	55	944	106	233	1573	150	89	972	113	136	1406	129
RTOR Reduction (vph)	0	0	22	0	0	7	0	0	78	0	8	0
Lane Group Flow (vph)	55	944	84	233	1573	143	89	972	35	136	1527	0
Turn Type	Perm		Perm	pm+pt		pm+ov	Perm		Perm	pm+pt		
Protected Phases		6		5		2	7		8		7	4
Permitted Phases	6		6	2		2	8		8		4	
Actuated Green, G (s)	31.0	31.0	31.0	43.0	43.0	48.7	28.1	28.1	28.1	37.0	37.0	37.0
Effective Green, g (s)	32.0	32.0	32.0	44.0	44.0	50.0	28.0	28.0	28.0	38.0	38.0	38.0
Actuated g/C Ratio	0.36	0.36	0.36	0.49	0.49	0.56	0.31	0.31	0.31	0.42	0.42	0.42
Clearance Time (s)	5.0	5.0	5.0	3.2	5.0	4.3	3.9	3.9	3.9	4.3	4.3	5.0
Vehicle Extension (s)	4.7	4.7	4.7	3.0	4.2	3.0	4.3	4.3	4.3	3.0	4.5	4.5
Lane Grp Cap (vph)	74	1126	504	219	1548	850	74	985	441	179	1320	1320
v/s Ratio Prot		0.30		0.09	c0.50	0.01		0.31		0.05	c0.49	
v/s Ratio Perm	0.26		0.06	c0.43		0.09	0.37		0.02	0.27		
v/c Ratio	0.74	0.84	0.17	1.06	1.02	0.17	1.20	0.99	0.08	0.76	1.16	1.16
Uniform Delay, d1	25.4	26.6	19.9	20.7	23.0	9.8	31.0	30.8	21.9	20.4	26.0	26.0
Progression Factor	1.00	1.00	1.00	2.11	0.30	0.36	0.50	0.49	0.14	0.79	0.45	0.45
Incremental Delay, d2	49.3	7.5	0.7	38.1	11.4	0.0	102.7	6.1	0.0	4.6	73.2	73.2
Delay (s)	74.7	34.1	20.6	81.8	18.4	3.5	118.3	21.2	3.0	20.7	84.9	84.9
Level of Service	E	C	C	F	B	A	F	C	A	C	F	F
Approach Delay (s)		34.9			24.8			26.8			79.7	79.7
Approach LOS		C			C			C			E	E

Intersection Summary

HCM Average Control Delay	42.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	124.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Fr _t	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Fl _t Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3136		1583	3167	1417	1583	3117		1583	3128	
Fl _t Permitted	0.11	1.00		0.24	1.00	1.00	0.14	1.00		0.12	1.00	
Satd. Flow (perm)	190	3136		394	3167	1417	230	3117		202	3128	
Volume (vph)	103	650	44	165	1568	183	65	1032	121	192	1373	123
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	114	722	49	183	1742	203	72	1147	134	213	1526	137
RTOR Reduction (vph)	0	6	0	0	0	29	0	10	0	0	8	0
Lane Group Flow (vph)	114	766	0	183	1742	174	72	1271	0	213	1655	0
Turn Type	pm+pt			pm+pt		pm+ov	Perm			pm+pt		
Protected Phases	1	6		5	2	7		8		7	4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	38.9	33.1		38.9	33.1	38.9	27.1	27.1		36.1	36.1	
Effective Green, g (s)	40.0	35.0		40.0	35.0	40.0	29.0	29.0		38.0	38.0	
Actuated g/C Ratio	0.44	0.39		0.44	0.39	0.44	0.32	0.32		0.42	0.42	
Clearance Time (s)	3.2	5.9		3.2	5.9	3.2	5.9	5.9		3.2	5.9	
Vehicle Extension (s)	3.0	4.6		3.0	4.7	3.0	4.7	4.7		3.0	4.7	
Lane Grp Cap (vph)	162	1220		241	1232	693	74	1004		162	1321	
v/s Ratio Prot	0.04	0.24		c0.04	c0.55	0.01		0.41		0.07	c0.53	
v/s Ratio Perm	0.27			0.30		0.11	0.31			c0.48		
v/c Ratio	0.70	0.63		0.76	1.41	0.25	0.97	1.27		1.31	1.25	
Uniform Delay, d ₁	43.3	22.2		19.3	27.5	15.6	30.1	30.5		44.7	26.0	
Progression Factor	1.00	1.00		0.63	0.81	0.73	1.48	1.49		0.93	0.55	
Incremental Delay, d ₂	13.0	2.4		6.9	188.8	0.1	94.4	127.2		145.7	114.5	
Delay (s)	56.2	24.7		19.1	211.2	11.6	139.1	172.5		187.3	128.8	
Level of Service	E	C		B	F	B	F	F		F	F	
Approach Delay (s)		28.7			175.6			170.7			135.5	
Approach LOS		C			F			F			F	

Intersection Summary

HCM Average Control Delay	141.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	123.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖↗	↖	↗	↖	↖↗	↗	↖	↖↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.94	1.00	1.00	0.91	1.00	0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.98	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1551	1638		3072	1667	1337	1583	3167	1287	1555	3105	
Flt Permitted	0.41	1.00		0.95	1.00	1.00	0.09	1.00	1.00	0.24	1.00	
Satd. Flow (perm)	672	1638		3072	1667	1337	142	3167	1287	399	3105	
Volume (vph)	27	266	29	363	478	100	10	854	80	57	1340	93
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	28	277	30	378	498	104	10	890	83	59	1396	97
RTOR Reduction (vph)	0	5	0	0	0	57	0	0	0	0	6	0
Lane Group Flow (vph)	28	302	0	378	498	47	10	890	83	59	1487	0
Conf. Peds. (#/hr)	28		6	6		28	43		36	36		43
Conf. Bikes (#/hr)			4			1			5			7
Turn Type	Perm			Prot		Perm	Perm	pm+ov		Perm		
Protected Phases		8		7	4			6	7		2	
Permitted Phases	8					4	6		6		2	
Actuated Green, G (s)	20.2	20.2		10.0	34.2	34.2	46.2	46.2	56.2	46.2	46.2	
Effective Green, g (s)	21.0	21.0		10.0	35.0	35.0	47.0	47.0	57.0	47.0	47.0	
Actuated g/C Ratio	0.23	0.23		0.11	0.39	0.39	0.52	0.52	0.63	0.52	0.52	
Clearance Time (s)	4.8	4.8		4.0	4.8	4.8	4.8	4.8	4.0	4.8	4.8	
Vehicle Extension (s)	5.9	5.9		3.0	5.2	5.2	4.8	4.8	3.0	4.4	4.4	
Lane Grp Cap (vph)	157	382		341	648	520	74	1654	872	208	1622	
v/s Ratio Prot		0.18		c0.12	c0.30			0.28	0.01		c0.48	
v/s Ratio Perm	0.04					0.03	0.07		0.05	0.15		
v/c Ratio	0.18	0.79		1.11	0.77	0.09	0.14	0.54	0.10	0.28	0.92	
Uniform Delay, d1	27.6	32.4		40.0	24.0	17.4	11.1	14.3	6.4	12.1	19.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.27	0.23	0.21	0.25	0.43	
Incremental Delay, d2	2.5	15.4		81.2	8.5	0.3	0.3	0.1	0.0	0.3	1.1	
Delay (s)	30.1	47.8		121.2	32.5	17.8	3.4	3.4	1.3	3.4	9.6	
Level of Service	C	D		F	C	B	A	A	A	A	A	
Approach Delay (s)		46.3			65.2			3.3			9.4	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM Average Control Delay	25.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↗		↖	↕↕↗		↖	↕↕		↖	↕↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.98		1.00	1.00	0.83
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4504		1579	4500		1583	3073		1583	3167	1177
Flt Permitted	0.14	1.00		0.14	1.00		0.13	1.00		0.95	1.00	1.00
Satd. Flow (perm)	238	4504		237	4500		222	3073		1583	3167	1177
Volume (vph)	131	1001	31	105	1889	46	218	1167	73	160	1606	257
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	139	1065	33	112	2010	49	232	1241	78	170	1709	273
RTOR Reduction (vph)	0	3	0	0	3	0	0	5	0	0	0	121
Lane Group Flow (vph)	139	1095	0	112	2056	0	232	1314	0	170	1709	152
Conf. Peds. (#/hr)	227		147	147		227	146		185	185		146
Conf. Bikes (#/hr)			2			6			8			6
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8					4
Actuated Green, G (s)	33.8	27.0		33.8	27.0		35.8	29.0		10.8	33.0	33.0
Effective Green, g (s)	34.0	28.0		34.0	28.0		36.0	30.0		10.0	34.0	34.0
Actuated g/C Ratio	0.38	0.31		0.38	0.31		0.40	0.33		0.11	0.38	0.38
Clearance Time (s)	3.2	5.0		3.2	5.0		3.2	5.0		3.2	5.0	5.0
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	180	1401		179	1400		180	1024		176	1196	445
v/s Ratio Prot	c0.05	0.24		0.04	c0.46		c0.09	0.43		0.11	c0.54	
v/s Ratio Perm	0.24			0.19			0.43					0.13
v/c Ratio	0.77	0.78		0.63	1.47		1.29	1.28		0.97	1.43	0.34
Uniform Delay, d1	43.0	28.2		20.1	31.0		44.2	30.0		39.8	28.0	20.0
Progression Factor	1.16	1.15		1.00	1.00		1.52	0.87		0.81	1.30	2.10
Incremental Delay, d2	14.2	3.3		6.7	214.9		158.4	133.2		41.7	195.8	1.2
Delay (s)	64.2	35.9		26.8	245.9		225.7	159.2		74.1	232.2	43.1
Level of Service	E	D		C	F		F	F		E	F	D
Approach Delay (s)		39.0			234.6			169.1			195.7	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	174.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	126.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗	↖	↔	↗		↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)			4.0	4.0	4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor			1.00	0.95	0.91	0.95		0.95		1.00	0.95	
Frbp, ped/bikes			0.98	1.00	0.98	0.97		0.99		1.00	1.00	
Flpb, ped/bikes			1.00	1.00	1.00	1.00		1.00		1.00	1.00	
Frt			0.86	1.00	0.93	0.85		0.98		1.00	1.00	
Flt Protected			1.00	0.95	0.97	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1412	1502	1350	1303		3075		1583	3167	
Flt Permitted			1.00	0.95	0.97	1.00		1.00		0.12	1.00	
Satd. Flow (perm)			1412	1502	1350	1303		3075		194	3167	
Volume (vph)	0	0	23	184	0	215	0	1182	176	122	1213	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	24	194	0	226	0	1244	185	128	1277	0
RTOR Reduction (vph)	0	0	23	0	38	123	0	11	0	0	0	0
Lane Group Flow (vph)	0	0	1	119	106	34	0	1418	0	128	1277	0
Conf. Peds. (#/hr)	11		1	1		11	8		23	23		8
Conf. Bikes (#/hr)						5			5			1
Turn Type			custom	Perm		Perm				Perm		
Protected Phases					3			2			2	
Permitted Phases			4	3		3				2		
Actuated Green, G (s)			2.2	18.6	18.6	18.6		54.8		54.8	54.8	
Effective Green, g (s)			3.1	19.5	19.5	19.5		55.4		55.4	55.4	
Actuated g/C Ratio			0.03	0.22	0.22	0.22		0.62		0.62	0.62	
Clearance Time (s)			4.9	4.9	4.9	4.9		4.6		4.6	4.6	
Vehicle Extension (s)			3.0	3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)			49	325	293	282		1893		119	1949	
v/s Ratio Prot								0.46			0.40	
v/s Ratio Perm			c0.00	c0.08	0.08	0.03				c0.66		
v/c Ratio			0.02	0.37	0.36	0.12		0.75		1.08	0.66	
Uniform Delay, d1			42.0	30.0	30.0	28.4		12.3		17.3	11.1	
Progression Factor			1.00	1.00	1.00	1.00		1.00		1.55	0.89	
Incremental Delay, d2			0.1	0.7	0.8	0.2		2.8		47.8	0.2	
Delay (s)			42.1	30.7	30.7	28.5		15.1		74.5	10.1	
Level of Service			D	C	C	C		B		E	B	
Approach Delay (s)		42.1			29.9			15.1			15.9	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM Average Control Delay			17.6									HCM Level of Service B
HCM Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			90.0									Sum of lost time (s) 12.0
Intersection Capacity Utilization			76.5%									ICU Level of Service D
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑		↔	↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	
Lane Util. Factor		0.91			0.91		1.00	0.86			0.86	
Frt		0.99			0.96		1.00	1.00			1.00	
Flt Protected		1.00			1.00		0.95	1.00			1.00	
Satd. Flow (prot)		4492			4370		1583	5733			5733	
Flt Permitted		1.00			1.00		0.17	1.00			1.00	
Satd. Flow (perm)		4492			4370		284	5733			5733	
Volume (vph)	0	1413	131	0	1817	650	182	1454	0	0	1416	0
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	1427	132	0	1835	657	184	1469	0	0	1430	0
RTOR Reduction (vph)	0	11	0	0	65	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1548	0	0	2427	0	184	1469	0	0	1430	0
Turn Type							Perm					
Protected Phases		6			6			2			2	
Permitted Phases							2					
Actuated Green, G (s)		22.1			22.1		24.5	24.5			24.5	
Effective Green, g (s)		23.0			23.0		23.5	23.5			23.5	
Actuated g/C Ratio		0.23			0.23		0.24	0.24			0.24	
Clearance Time (s)		4.9			4.9		3.0	3.0			3.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		1033			1005		67	1347			1347	
v/s Ratio Prot		0.34			c0.56			0.26			0.25	
v/s Ratio Perm							c0.65					
v/c Ratio		1.50			2.42		2.75	1.09			1.06	
Uniform Delay, d1		38.5			38.5		38.2	38.2			38.2	
Progression Factor		0.69			1.00		1.00	1.00			0.61	
Incremental Delay, d2		224.9			639.9		826.0	53.1			29.7	
Delay (s)		251.5			678.4		864.3	91.4			52.9	
Level of Service		F			F		F	F			D	
Approach Delay (s)		251.5			678.4			177.4			52.9	
Approach LOS		F			F			F			D	

Intersection Summary

HCM Average Control Delay	343.6	HCM Level of Service	F
HCM Volume to Capacity ratio	2.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	53.5
Intersection Capacity Utilization	99.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗		↑↑↑	↗		↑↗		↘	↑↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.86	1.00		0.91	1.00		0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85		1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1583	5733	1417		4550	1417		3166		1583	3138	
Flt Permitted	0.17	1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)	284	5733	1417		4550	1417		3166		1583	3138	
Volume (vph)	122	1141	40	0	1776	362	0	904	2	230	1213	77
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	126	1176	41	0	1831	373	0	932	2	237	1251	79
RTOR Reduction (vph)	0	0	31	0	0	220	0	0	0	0	5	0
Lane Group Flow (vph)	126	1176	10	0	1831	153	0	934	0	237	1325	0
Turn Type	Perm		Perm		Perm				Prot			
Protected Phases	2		2		2		8		7		4	
Permitted Phases	2		2		2							
Actuated Green, G (s)	24.5	24.5	24.5		24.5	24.5		31.0		5.0	31.0	
Effective Green, g (s)	23.5	23.5	23.5		23.5	23.5		32.5		5.0	32.5	
Actuated g/C Ratio	0.24	0.24	0.24		0.24	0.24		0.32		0.05	0.32	
Clearance Time (s)	3.0	3.0	3.0		3.0	3.0		5.5		4.0	5.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		5.0		3.0	4.0	
Lane Grp Cap (vph)	67	1347	333		1069	333		1029		79	1020	
v/s Ratio Prot		0.21			0.40			0.30		c0.15	c0.42	
v/s Ratio Perm	c0.44		0.01			0.11						
v/c Ratio	1.88	0.87	0.03		1.71	0.46		0.91		3.00	1.30	
Uniform Delay, d1	38.2	36.8	29.5		38.2	32.8		32.3		47.5	33.8	
Progression Factor	1.00	1.00	1.00		0.96	1.35		0.20		1.00	1.00	
Incremental Delay, d2	447.1	8.1	0.2		321.1	0.4		6.9		933.0	141.9	
Delay (s)	485.4	44.9	29.6		357.9	44.7		13.4		980.5	175.7	
Level of Service	F	D	C		F	D		B		F	F	
Approach Delay (s)		85.7			304.9			13.4			297.4	
Approach LOS		F			F			B			F	

Intersection Summary

HCM Average Control Delay	209.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	39.0
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶		↶	↶↶			↶↶	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95			0.95	
Frt	1.00	1.00		1.00	1.00		1.00	1.00			0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1583	4541		1583	4549		1583	3159			3027	
Flt Permitted	0.17	1.00		0.17	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	290	4541		290	4549		1583	3159			3027	
Volume (vph)	32	1513	21	41	1783	2	55	876	15	0	851	353
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	33	1544	21	42	1819	2	56	894	15	0	868	360
RTOR Reduction (vph)	0	2	0	0	0	0	0	1	0	0	45	0
Lane Group Flow (vph)	33	1563	0	42	1821	0	56	908	0	0	1183	0
Turn Type	Perm		Perm		Prot							
Protected Phases	6		6		3		8				4	
Permitted Phases	6		6									
Actuated Green, G (s)	22.1	22.1		22.1	22.1		5.0	31.0			31.0	
Effective Green, g (s)	23.0	23.0		23.0	23.0		5.0	32.5			32.5	
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.05	0.32			0.32	
Clearance Time (s)	4.9	4.9		4.9	4.9		4.0	5.5			5.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	5.0			4.0	
Lane Grp Cap (vph)	67	1044		67	1046		79	1027			984	
v/s Ratio Prot		0.34			c0.40		c0.04	0.29			c0.39	
v/s Ratio Perm	0.11			0.14								
v/c Ratio	0.49	1.50		0.63	1.74		0.71	0.88			1.20	
Uniform Delay, d1	33.4	38.5		34.6	38.5		46.8	32.0			33.8	
Progression Factor	1.00	1.00		0.70	0.69		1.00	1.00			0.29	
Incremental Delay, d2	23.6	229.0		4.0	333.8		25.1	11.0			91.9	
Delay (s)	57.1	267.5		28.3	360.3		71.9	43.0			101.8	
Level of Service	E	F		C	F		E	D			F	
Approach Delay (s)		263.1			352.8			44.7			101.8	
Approach LOS		F			F			D			F	

Intersection Summary

HCM Average Control Delay	220.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	39.5
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↖	↗	↗	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Fr _t	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	3123		1583	3148		1583	3167	1417	1583	3167	1417
Fl _t Permitted	0.13	1.00		0.13	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	222	3123		222	3148		1583	3167	1417	1583	3167	1417
Volume (vph)	70	916	92	85	1531	63	148	924	139	43	882	146
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	72	944	95	88	1578	65	153	953	143	44	909	151
RTOR Reduction (vph)	0	9	0	0	3	0	0	0	75	0	0	27
Lane Group Flow (vph)	72	1030	0	88	1640	0	153	953	68	44	909	124
Turn Type	Perm			Perm			Prot		Perm	Prot		Perm
Protected Phases	6			2			3		8	7		4
Permitted Phases	6			2					8			4
Actuated Green, G (s)	29.0	29.0		29.0	29.0		10.0	41.6	41.6	5.4	37.0	37.0
Effective Green, g (s)	30.0	30.0		30.0	30.0		10.0	42.6	42.6	5.4	38.0	38.0
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.11	0.47	0.47	0.06	0.42	0.42
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	74	1041		74	1049		176	1499	671	95	1337	598
v/s Ratio Prot		0.33			c0.52		c0.10	0.30		0.03	c0.29	
v/s Ratio Perm	0.32			0.40					0.05			0.09
v/c Ratio	0.97	0.99		1.19	1.56		0.87	0.64	0.10	0.46	0.68	0.21
Uniform Delay, d ₁	29.6	29.8		30.0	30.0		39.4	17.9	13.1	40.9	21.1	16.5
Progression Factor	0.53	0.55		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d ₂	25.5	6.3		164.3	258.1		33.6	2.1	0.3	3.5	2.8	0.8
Delay (s)	41.3	22.6		194.3	288.1		73.0	19.9	13.4	44.4	23.9	17.2
Level of Service	D	C		F	F		E	B	B	D	C	B
Approach Delay (s)		23.8			283.3			25.7			23.8	
Approach LOS		C			F			C			C	

Intersection Summary

HCM Average Control Delay	110.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↑↑			↖	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95			0.95	
Frt	1.00	0.99		1.00	1.00			0.96			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1583	4502		1583	4545			3046			3082	
Flt Permitted	0.09	1.00		0.16	1.00			1.00			0.65	
Satd. Flow (perm)	152	4502		265	4545			3046			2017	
Volume (vph)	64	1067	81	244	2020	16	0	532	180	129	956	186
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	69	1147	87	262	2172	17	0	572	194	139	1028	200
RTOR Reduction (vph)	0	10	0	0	1	0	0	27	0	0	1	0
Lane Group Flow (vph)	69	1224	0	262	2188	0	0	739	0	0	1366	0
Turn Type	Perm		Perm				Perm					
Protected Phases	6		2				8					
Permitted Phases	6		2				4					
Actuated Green, G (s)	42.3	42.3		42.3	42.3			36.0			36.0	
Effective Green, g (s)	44.0	44.0		44.0	44.0			38.0			38.0	
Actuated g/C Ratio	0.49	0.49		0.49	0.49			0.42			0.42	
Clearance Time (s)	5.7	5.7		5.7	5.7			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	74	2201		130	2222			1286			852	
v/s Ratio Prot		0.27			0.48			0.24				
v/s Ratio Perm	0.46			c0.99							c0.68	
v/c Ratio	0.93	0.56		2.02	0.98			0.57			1.60	
Uniform Delay, d1	21.6	16.1		23.0	22.7			19.8			26.0	
Progression Factor	0.43	0.50		0.63	0.53			1.00			1.00	
Incremental Delay, d2	47.2	0.4		459.4	3.2			0.6			276.9	
Delay (s)	56.5	8.4		474.0	15.2			20.5			302.9	
Level of Service	E	A		F	B			C			F	
Approach Delay (s)		11.0			64.2			20.5			302.9	
Approach LOS		B			E			C			F	

Intersection Summary

HCM Average Control Delay	102.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	128.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑↑		↗	↑↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4472		1583	4476		1583	4477		1583	4550	1417
Flt Permitted	0.13	1.00		0.13	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	215	4472		215	4476		1583	4477		1583	4550	1417
Volume (vph)	53	1139	146	109	1649	202	503	1245	149	273	1128	186
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	57	1225	157	117	1773	217	541	1339	160	294	1213	200
RTOR Reduction (vph)	0	18	0	0	17	0	0	17	0	0	0	3
Lane Group Flow (vph)	57	1364	0	117	1973	0	541	1482	0	294	1213	197
Turn Type	Perm			Perm			Prot			Prot		Perm
Protected Phases	4			8			5			1		6
Permitted Phases	4			8			2					6
Actuated Green, G (s)	29.0	29.0		29.0	29.0		14.0	31.0		15.0	31.0	31.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		15.0	32.0		15.0	32.0	32.0
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.17	0.36		0.17	0.36	0.36
Clearance Time (s)	6.0	6.0		6.0	6.0		5.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	4.0	4.0		4.0	4.0		2.0	4.0		2.0	4.0	4.0
Lane Grp Cap (vph)	74	1540		74	1542		264	1592		264	1618	504
v/s Ratio Prot		0.31			0.44		c0.34			0.19	0.27	
v/s Ratio Perm	0.27			c0.54			c0.33					0.14
v/c Ratio	0.77	0.89		1.58	1.28		2.05	0.93		1.11	0.75	0.39
Uniform Delay, d1	26.3	27.8		29.5	29.5		37.5	27.9		37.5	25.5	21.7
Progression Factor	1.00	1.00		0.43	0.41		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	53.7	7.9		267.3	126.2		485.1	11.2		89.4	3.2	2.3
Delay (s)	80.0	35.7		280.1	138.2		522.6	39.2		126.9	28.7	24.0
Level of Service	F	D		F	F		F	D		F	C	C
Approach Delay (s)		37.5			146.1			167.4			45.1	
Approach LOS		D			F			F			D	

Intersection Summary

HCM Average Control Delay	107.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	117.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	0.96
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	1.00
Satd. Flow (prot)	1583	4529		1564	4521			1589			1657	1364
Flt Permitted	0.06	1.00		0.16	1.00			0.94			0.97	1.00
Satd. Flow (perm)	98	4529		268	4521			1499			1614	1364
Volume (vph)	84	1214	21	26	1957	47	27	155	48	17	200	101
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	1349	23	29	2174	52	30	172	53	19	222	112
RTOR Reduction (vph)	0	2	0	0	3	0	0	9	0	0	0	8
Lane Group Flow (vph)	93	1370	0	29	2223	0	0	246	0	0	241	104
Confl. Peds. (#/hr)	47		44	44		47	18		31	31		18
Confl. Bikes (#/hr)			3			2			4			1
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	69.0	69.0		69.0	69.0			25.0			25.0	25.0
Effective Green, g (s)	68.0	68.0		68.0	68.0			24.0			24.0	24.0
Actuated g/C Ratio	0.68	0.68		0.68	0.68			0.24			0.24	0.24
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0			3.0			3.0	3.0
Lane Grp Cap (vph)	67	3080		182	3074			360			387	327
v/s Ratio Prot		0.30			0.49							
v/s Ratio Perm	c0.95			0.11				c0.16			0.15	0.08
v/c Ratio	1.39	0.44		0.16	0.72			0.68			0.62	0.32
Uniform Delay, d1	16.0	7.3		5.7	10.1			34.5			34.0	31.3
Progression Factor	0.77	0.39		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	206.7	0.2		1.9	1.5			10.1			7.4	2.5
Delay (s)	219.0	3.0		7.6	11.6			44.6			41.3	33.8
Level of Service	F	A		A	B			D			D	C
Approach Delay (s)		16.7			11.5			44.6			38.9	
Approach LOS		B			B			D			D	

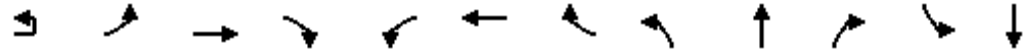
Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕↕	↗	↔	↕↕		↗↗	↕↕↕		↗↗	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.91		0.97	0.91	
Frbp, ped/bikes	1.00	1.00	0.90	1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3167	1276	1567	3110		3072	4455		3072	4452	
Flt Permitted	0.11	1.00	1.00	0.33	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	187	3167	1276	545	3110		3072	4455		3072	4452	
Volume (vph)	193	458	42	296	1310	93	176	1341	86	50	2140	204
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	210	498	46	322	1424	101	191	1458	93	54	2326	222
RTOR Reduction (vph)	0	0	32	0	4	0	0	5	0	0	9	0
Lane Group Flow (vph)	210	498	14	322	1521	0	191	1546	0	54	2539	0
Confl. Peds. (#/hr)	72		58	58		72	51		51	51		51
Confl. Bikes (#/hr)			3			3			6			3
Turn Type	pm+pt		Perm	pm+pt		Prot		Prot				
Protected Phases	1	6		5	2	3	8		7	4		
Permitted Phases	6		6	2								
Actuated Green, G (s)	49.0	34.3	34.3	49.6	34.6	12.9	47.0		6.3	40.4		
Effective Green, g (s)	49.4	35.7	35.7	50.0	36.0	12.9	48.0		6.3	41.4		
Actuated g/C Ratio	0.41	0.30	0.30	0.42	0.30	0.11	0.40		0.05	0.34		
Clearance Time (s)	3.0	5.4	5.4	3.0	5.4	4.0	5.0		4.0	5.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	236	942	380	346	933	330	1782		161	1536		
v/s Ratio Prot	0.10	0.16		c0.11	c0.49	0.06	c0.35		0.02	c0.57		
v/s Ratio Perm	0.26		0.01	0.28								
v/c Ratio	0.89	0.53	0.04	0.93	1.63	0.58	0.87		0.34	1.65		
Uniform Delay, d1	31.9	35.1	29.9	29.4	42.0	51.0	33.1		54.8	39.3		
Progression Factor	1.60	0.73	0.58	1.00	1.00	0.76	0.64		1.23	0.40		
Incremental Delay, d2	26.7	0.4	0.0	31.1	288.4	2.1	5.3		0.1	294.1		
Delay (s)	77.8	26.0	17.5	60.5	330.4	41.1	26.6		67.5	309.6		
Level of Service	E	C	B	E	F	D	C		E	F		
Approach Delay (s)		39.9			283.3		28.2			304.6		
Approach LOS		D			F		C			F		

Intersection Summary

HCM Average Control Delay	200.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	126.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↑↑		↔	↑↑↑	↔	↔		↔	↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00		0.91		1.00	0.86	0.86	1.00		1.00	0.97	
Frt	1.00		0.99		1.00	1.00	0.85	1.00		0.85	1.00	
Flt Protected	0.95		1.00		0.95	1.00	1.00	0.95		1.00	0.95	
Satd. Flow (prot)	1583		4523		1583	4300	1218	1583		1417	3072	
Flt Permitted	0.95		1.00		0.95	1.00	1.00	0.95		1.00	0.95	
Satd. Flow (perm)	1583		4523		1583	4300	1218	1583		1417	3072	
Volume (vph)	2	0	600	25	6	1596	816	13	0	13	790	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	2	0	645	27	6	1716	877	14	0	14	849	0
RTOR Reduction (vph)	0	0	2	0	0	0	300	0	0	13	0	0
Lane Group Flow (vph)	2	0	670	0	6	1716	577	14	0	1	849	0
Turn Type	Prot				Prot		Perm	Prot			custom	custom
Protected Phases	5		2		1		6			7		
Permitted Phases							6				7	8
Actuated Green, G (s)	2.6		69.2		1.4		67.1			4.4		23.2
Effective Green, g (s)	4.5		70.2		3.3		69.0			5.4		25.1
Actuated g/C Ratio	0.04		0.59		0.03		0.58			0.05		0.21
Clearance Time (s)	5.9		5.0		5.9		5.9			5.0		5.9
Vehicle Extension (s)	3.0		3.0		3.0		3.0			3.0		3.0
Lane Grp Cap (vph)	59		2646		44		2473			71		643
v/s Ratio Prot	0.00		c0.15		0.00		0.40			c0.01		
v/s Ratio Perm										c0.47		
v/c Ratio	0.03		0.25		0.14		0.69			0.20		1.32
Uniform Delay, d1	55.7		12.1		57.0		18.0			20.6		55.2
Progression Factor	1.03		1.29		1.08		0.82			3.96		1.00
Incremental Delay, d2	0.2		0.2		0.1		0.1			1.1		1.4
Delay (s)	57.5		15.8		61.7		14.9			82.6		56.6
Level of Service	E		B		E		B			F		E
Approach Delay (s)			15.9				37.8			55.7		186.7
Approach LOS			B				D			E		F

Intersection Summary

HCM Average Control Delay	71.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	7
Ideal Flow (vphpl)	1700
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1417
Flt Permitted	1.00
Satd. Flow (perm)	1417
Volume (vph)	220
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	237
RTOR Reduction (vph)	179
Lane Group Flow (vph)	58
Turn Type	custom
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	23.2
Effective Green, g (s)	25.1
Actuated g/C Ratio	0.21
Clearance Time (s)	5.9
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	296
v/s Ratio Prot	
v/s Ratio Perm	0.04
v/c Ratio	0.20
Uniform Delay, d1	39.1
Progression Factor	3.60
Incremental Delay, d2	0.7
Delay (s)	141.8
Level of Service	F
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑	↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor		0.86	1.00		0.86	1.00	1.00	0.91			0.91	
Frt		1.00	0.85		1.00	0.85	1.00	1.00			0.97	
Flt Protected		1.00	1.00		1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)		5733	1417		5733	1417	1583	4548			4397	
Flt Permitted		1.00	1.00		1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)		5733	1417		5733	1417	1583	4548			4397	
Volume (vph)	0	1084	293	0	1535	308	316	1353	4	0	1880	544
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1106	299	0	1566	314	322	1381	4	0	1918	555
RTOR Reduction (vph)	0	0	2	0	0	32	0	0	0	0	2	0
Lane Group Flow (vph)	0	1106	297	0	1566	282	322	1385	0	0	2471	0
Turn Type		pm+ov			Perm		Prot					
Protected Phases		8	1		4		1	6			2	
Permitted Phases		8	8			4						
Actuated Green, G (s)		39.0	49.0		39.0	39.0	10.0	69.0			53.5	
Effective Green, g (s)		41.0	52.5		41.0	41.0	11.5	71.0			55.5	
Actuated g/C Ratio		0.34	0.44		0.34	0.34	0.10	0.59			0.46	
Clearance Time (s)		6.0	5.5		6.0	6.0	5.5	6.0			6.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)		1959	667		1959	484	152	2691			2034	
v/s Ratio Prot		0.19	0.04		c0.27		c0.20	0.30			c0.56	
v/s Ratio Perm			0.17			0.20						
v/c Ratio		0.56	0.45		0.80	0.58	2.12	0.51			1.21	
Uniform Delay, d1		32.2	23.6		35.8	32.5	54.2	14.4			32.2	
Progression Factor		1.35	1.88		1.00	1.00	1.23	0.77			0.34	
Incremental Delay, d2		0.6	0.2		3.5	5.1	521.8	0.6			97.1	
Delay (s)		44.1	44.5		39.3	37.6	588.7	11.6			108.2	
Level of Service		D	D		D	D	F	B			F	
Approach Delay (s)		44.2			39.0			120.5			108.2	
Approach LOS		D			D			F			F	

Intersection Summary

HCM Average Control Delay	81.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕↕↕		↗	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.95			0.98		1.00	1.00		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1564			1612		1583	4533		1583	4467	
Flt Permitted		0.89			0.90		0.06	1.00		0.11	1.00	
Satd. Flow (perm)		1413			1476		103	4533		179	4467	
Volume (vph)	50	61	62	26	51	12	88	1567	40	73	1745	240
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	64	65	27	54	13	93	1649	42	77	1837	253
RTOR Reduction (vph)	0	17	0	0	5	0	0	2	0	0	15	0
Lane Group Flow (vph)	0	165	0	0	89	0	93	1689	0	77	2075	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		8		8		2		6		6	
Permitted Phases	4		8		8		2		6		6	
Actuated Green, G (s)	30.0		30.0		30.0		83.4		83.4		83.4	
Effective Green, g (s)	29.0		29.0		29.0		83.0		83.0		83.0	
Actuated g/C Ratio	0.24		0.24		0.24		0.69		0.69		0.69	
Clearance Time (s)	3.0		3.0		3.0		3.6		3.6		3.6	
Vehicle Extension (s)	3.0		3.0		3.0		5.0		5.0		5.0	
Lane Grp Cap (vph)	341		357		357		71		3135		124	
v/s Ratio Prot							0.37				0.46	
v/s Ratio Perm	c0.12		0.06		0.06		c0.90		0.43			
v/c Ratio	0.48		0.25		0.25		1.31		0.54		0.62	
Uniform Delay, d1	39.1		36.7		36.7		18.5		9.1		10.0	
Progression Factor	1.00		1.00		1.00		1.00		1.00		0.79	
Incremental Delay, d2	4.9		1.7		1.7		210.4		0.7		2.1	
Delay (s)	43.9		38.4		38.4		228.9		9.8		10.0	
Level of Service	D		D		D		F		A		B	
Approach Delay (s)	43.9		38.4		38.4		21.2				4.3	
Approach LOS	D		D		D		C				A	

Intersection Summary

HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑↑		↗	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.97		1.00	0.99		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4314		1583	4509		1583	4411		1583	4369	
Flt Permitted	0.11	1.00		0.11	1.00		0.11	1.00		0.12	1.00	
Satd. Flow (perm)	190	4314		192	4509		183	4411		193	4369	
Volume (vph)	125	1105	210	117	2071	51	490	1628	214	86	1618	199
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	132	1163	221	123	2180	54	516	1714	225	91	1703	209
RTOR Reduction (vph)	0	28	0	0	3	0	0	16	0	0	15	0
Lane Group Flow (vph)	132	1356	0	123	2231	0	516	1923	0	91	1897	0
Conf. Peds. (#/hr)	149		118	118		149	146		73	73		146
Conf. Bikes (#/hr)			4			7			3			1
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	44.1	35.5		43.7	35.3		44.5	36.5		40.7	34.6	
Effective Green, g (s)	42.6	35.0		42.2	34.8		43.5	36.5		39.7	34.6	
Actuated g/C Ratio	0.43	0.35		0.42	0.35		0.44	0.36		0.40	0.35	
Clearance Time (s)	3.0	3.5		3.0	3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	187	1510		184	1569		178	1610		148	1512	
v/s Ratio Prot	c0.05	0.31		0.05	c0.49		c0.20	0.44		0.03	0.43	
v/s Ratio Perm	0.25			0.23			c1.06			0.21		
v/c Ratio	0.71	0.90		0.67	1.42		2.90	1.19		0.61	1.25	
Uniform Delay, d1	24.1	30.8		21.1	32.6		48.7	31.8		25.3	32.7	
Progression Factor	1.02	1.18		1.64	1.26		1.84	0.90		1.00	1.00	
Incremental Delay, d2	8.8	8.2		5.0	192.7		861.3	90.5		5.2	120.2	
Delay (s)	33.4	44.5		39.6	233.8		951.1	119.0		30.5	152.9	
Level of Service	C	D		D	F		F	F		C	F	
Approach Delay (s)		43.5			223.7			293.9			147.3	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	193.2	HCM Level of Service	F
HCM Volume to Capacity ratio	2.16		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	138.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑↑↑		↕	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes		0.96			0.99		1.00	0.99		1.00	0.97	
Flpb, ped/bikes		1.00			0.99		0.99	1.00		1.00	1.00	
Frt		0.95			0.99		1.00	0.99		1.00	0.98	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1504			1586		1571	4458		1583	4346	
Flt Permitted		0.81			0.58		0.06	1.00		0.06	1.00	
Satd. Flow (perm)		1222			934		106	4458		104	4346	
Volume (vph)	58	150	128	181	294	51	125	2177	194	20	1685	214
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	61	158	135	191	309	54	132	2292	204	21	1774	225
RTOR Reduction (vph)	0	12	0	0	4	0	0	10	0	0	16	0
Lane Group Flow (vph)	0	342	0	0	550	0	132	2486	0	21	1983	0
Conf. Peds. (#/hr)	39		76	76		39	104		34	34		104
Conf. Bikes (#/hr)			2			2			6			4
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.0			29.0		64.2	64.2		64.2	64.2	
Effective Green, g (s)		28.0			28.0		64.0	64.0		64.0	64.0	
Actuated g/C Ratio		0.28			0.28		0.64	0.64		0.64	0.64	
Clearance Time (s)		3.0			3.0		3.8	3.8		3.8	3.8	
Vehicle Extension (s)		3.0			3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		342			262		68	2853		67	2781	
v/s Ratio Prot								0.56			0.46	
v/s Ratio Perm		0.28			c0.59		c1.24			0.20		
v/c Ratio		1.00			2.10		1.94	0.87		0.31	0.71	
Uniform Delay, d1		36.0			36.0		18.0	14.6		8.1	11.9	
Progression Factor		1.00			1.00		1.00	1.00		1.50	1.48	
Incremental Delay, d2		49.0			508.1		472.5	4.0		1.1	0.1	
Delay (s)		85.0			544.1		490.5	18.6		13.3	17.8	
Level of Service		F			F		F	B		B	B	
Approach Delay (s)		85.0			544.1			42.3			17.7	
Approach LOS		F			F			D			B	

Intersection Summary			
HCM Average Control Delay	86.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.99		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	124.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕↕		↖	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	1.00		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4482		1583	4536		1583	4533		1583	4475	
Flt Permitted	0.15	1.00		0.13	1.00		0.12	1.00		0.12	1.00	
Satd. Flow (perm)	256	4482		222	4536		196	4533		196	4475	
Volume (vph)	221	1515	167	206	2455	51	179	2142	56	113	1660	205
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	228	1562	172	212	2531	53	185	2208	58	116	1711	211
RTOR Reduction (vph)	0	15	0	0	2	0	0	3	0	0	17	0
Lane Group Flow (vph)	228	1719	0	212	2582	0	185	2263	0	116	1905	0
Turn Type	Perm		pm+pt		pm+pt		pm+pt		pm+pt			
Protected Phases	6		5		2		3		8		7	
Permitted Phases	6		2				8				4	
Actuated Green, G (s)	25.0	25.0		36.0	36.0		40.1	33.1		39.9	33.0	
Effective Green, g (s)	26.0	26.0		37.0	37.0		41.1	34.1		40.9	34.0	
Actuated g/C Ratio	0.29	0.29		0.41	0.41		0.46	0.38		0.45	0.38	
Clearance Time (s)	5.0	5.0		3.5	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	1295		197	1865		197	1718		195	1691	
v/s Ratio Prot		0.38		0.08	c0.57		c0.07	c0.50		0.05	0.43	
v/s Ratio Perm	c0.89			0.36			0.36			0.22		
v/c Ratio	3.08	1.33		1.08	1.38		0.94	1.32		0.59	1.13	
Uniform Delay, d1	32.0	32.0		43.7	26.5		21.1	27.9		20.9	28.0	
Progression Factor	0.68	0.68		1.00	1.00		1.67	0.36		1.00	1.00	
Incremental Delay, d2	951.9	149.8		85.8	176.3		8.6	143.1		4.8	65.1	
Delay (s)	973.7	171.5		129.5	202.8		43.8	153.2		25.7	93.1	
Level of Service	F	F		F	F		D	F		C	F	
Approach Delay (s)		264.7			197.3			144.9			89.3	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	173.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	135.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘		↗	↗↘↙		↗	↗↘↙	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3088		1583	3125		1583	4512		1583	4484	
Flt Permitted	0.15	1.00		0.13	1.00		0.12	1.00		0.14	1.00	
Satd. Flow (perm)	253	3088		220	3125		202	4512		230	4484	
Volume (vph)	122	875	175	155	1499	143	402	2145	128	94	1716	184
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	126	902	180	160	1545	147	414	2211	132	97	1769	190
RTOR Reduction (vph)	0	18	0	0	1	0	0	7	0	0	9	0
Lane Group Flow (vph)	126	1064	0	160	1691	0	414	2336	0	97	1950	0
Turn Type	Perm		pm+pt		pm+pt		Perm					
Protected Phases	8		7		4		1		6		2	
Permitted Phases	8		4				6				2	
Actuated Green, G (s)	25.3	25.3	38.0		38.0	42.0		42.0	28.0		28.0	
Effective Green, g (s)	26.3	26.3	39.0		39.0	43.0		43.0	29.0		29.0	
Actuated g/C Ratio	0.29	0.29	0.43		0.43	0.48		0.48	0.32		0.32	
Clearance Time (s)	5.0	5.0	3.0		5.0	4.0		5.0	5.0		5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	74	902	227		1354	250		2156	74		1445	
v/s Ratio Prot	0.34		0.07		c0.54	c0.18		0.52			0.43	
v/s Ratio Perm	c0.50		0.24			c0.61			0.42			
v/c Ratio	1.70	1.18	0.70		1.25	1.66		1.08	1.31		1.35	
Uniform Delay, d1	31.8	31.8	21.0		25.5	42.2		23.5	30.5		30.5	
Progression Factor	1.00	1.00	0.73		0.95	1.00		1.00	0.99		0.97	
Incremental Delay, d2	367.0	92.1	0.9		112.6	312.4		46.3	148.6		157.8	
Delay (s)	398.9	124.0	16.3		136.9	354.6		69.8	178.9		187.5	
Level of Service	F	F	B		F	F		E	F		F	
Approach Delay (s)	152.6				126.5	112.6			187.1			
Approach LOS	F				F	F			F			

Intersection Summary

HCM Average Control Delay	141.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	139.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		0.98	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3087		1555	3104		1583	3141		1568	3026	
Flt Permitted	0.06	1.00		0.31	1.00		0.09	1.00		0.14	1.00	
Satd. Flow (perm)	100	3087		504	3104		147	3141		224	3026	
Volume (vph)	80	588	76	89	1440	120	119	819	31	100	827	154
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	90	661	85	100	1618	135	134	920	35	112	929	173
RTOR Reduction (vph)	0	8	0	0	5	0	0	2	0	0	10	0
Lane Group Flow (vph)	90	738	0	100	1748	0	134	953	0	112	1092	0
Conf. Peds. (#/hr)	50		55	55		50	55		50	50		55
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	6		2		2		8		8		4	
Permitted Phases	6		2		2		8		8		4	
Actuated Green, G (s)	64.6	64.6		64.6	64.6		44.1	44.1		44.1	44.1	
Effective Green, g (s)	66.5	66.5		66.5	66.5		45.5	45.5		45.5	45.5	
Actuated g/C Ratio	0.55	0.55		0.55	0.55		0.38	0.38		0.38	0.38	
Clearance Time (s)	5.9	5.9		5.9	5.9		5.4	5.4		5.4	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	55	1711		279	1720		56	1191		85	1147	
v/s Ratio Prot		0.24			0.56			0.30			0.36	
v/s Ratio Perm	c0.90		0.20		0.20		c0.91		0.50		0.50	
v/c Ratio	1.64	0.43		0.36	1.02		2.39	0.80		1.32	0.95	
Uniform Delay, d1	26.8	15.7		14.9	26.8		37.2	33.2		37.2	36.2	
Progression Factor	1.00	1.00		0.41	0.74		1.17	1.15		1.00	1.00	
Incremental Delay, d2	354.4	0.8		0.3	11.1		664.1	4.1		204.4	17.3	
Delay (s)	381.1	16.5		6.5	31.0		707.7	42.3		241.6	53.5	
Level of Service	F	B		A	C		F	D		F	D	
Approach Delay (s)		55.7			29.7			124.2			70.9	
Approach LOS		E			C			F			E	

Intersection Summary

HCM Average Control Delay	64.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	110.8%	ICU Level of Service	H
Analysis Period (min)	15		



























c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1583	4532		1583	4542			1611			1589	
Flt Permitted	0.06	1.00		0.16	1.00			0.95			0.94	
Satd. Flow (perm)	100	4532		272	4542			1539			1509	
Volume (vph)	21	1274	35	44	2605	32	35	175	52	22	98	51
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	22	1327	36	46	2714	33	36	182	54	23	102	53
RTOR Reduction (vph)	0	3	0	0	1	0	0	9	0	0	3	0
Lane Group Flow (vph)	22	1360	0	46	2746	0	0	263	0	0	175	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	68.0	68.0		68.0	68.0			26.0			26.0	
Effective Green, g (s)	67.0	67.0		67.0	67.0			25.0			25.0	
Actuated g/C Ratio	0.67	0.67		0.67	0.67			0.25			0.25	
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0			3.0			3.0	
Lane Grp Cap (vph)	67	3036		182	3043			385			377	
v/s Ratio Prot		0.30			c0.60							
v/s Ratio Perm	0.22			0.17				c0.17			0.12	
v/c Ratio	0.33	0.45		0.25	0.90			0.68			0.46	
Uniform Delay, d1	7.0	7.8		6.6	13.8			33.9			31.8	
Progression Factor	0.59	0.31		0.26	0.77			1.00			1.00	
Incremental Delay, d2	9.1	0.3		0.3	0.5			9.5			4.1	
Delay (s)	13.2	2.8		2.0	11.0			43.4			35.9	
Level of Service	B	A		A	B			D			D	
Approach Delay (s)		2.9			10.9			43.4			35.9	
Approach LOS		A			B			D			D	

Intersection Summary

HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			  							
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3167	1417	1583	4550	1417	1583	1667	1417	1583	1645	
Flt Permitted	0.23	1.00	1.00	0.25	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	388	3167	1417	413	4550	1417	1583	1667	1417	1583	1645	
Volume (vph)	86	624	64	108	1429	92	82	574	35	40	733	70
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	92	671	69	116	1537	99	88	617	38	43	788	75
RTOR Reduction (vph)	0	0	49	0	0	71	0	0	21	0	5	0
Lane Group Flow (vph)	92	671	20	116	1537	28	88	617	17	43	858	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4			4		1	2		1	6	
Permitted Phases	4		4	4		4			2			
Actuated Green, G (s)	16.2	16.2	16.2	16.2	16.2	16.2	3.4	26.6	26.6	3.4	26.6	
Effective Green, g (s)	17.2	17.2	17.2	17.2	17.2	17.2	3.4	27.4	27.4	3.4	27.4	
Actuated g/C Ratio	0.29	0.29	0.29	0.29	0.29	0.29	0.06	0.46	0.46	0.06	0.46	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.8	4.8	4.0	4.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	908	406	118	1304	406	90	761	647	90	751	
v/s Ratio Prot		0.21			c0.34		c0.06	0.37		0.03	c0.52	
v/s Ratio Perm	0.24		0.01	0.28		0.02			0.01			
v/c Ratio	0.83	0.74	0.05	0.98	1.18	0.07	0.98	0.81	0.03	0.48	1.14	
Uniform Delay, d1	20.0	19.4	15.5	21.3	21.4	15.6	28.3	14.1	9.0	27.4	16.3	
Progression Factor	1.00	1.00	1.00	1.23	1.31	1.66	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	48.3	5.4	0.2	69.4	87.1	0.3	86.7	9.2	0.1	4.0	79.4	
Delay (s)	68.3	24.7	15.7	95.5	115.1	26.1	114.9	23.2	9.0	31.4	95.7	
Level of Service	E	C	B	F	F	C	F	C	A	C	F	
Approach Delay (s)		28.8			108.8			33.4			92.6	
Approach LOS		C			F			C			F	
Intersection Summary												
HCM Average Control Delay			76.4				HCM Level of Service		E			
HCM Volume to Capacity ratio			1.14									
Actuated Cycle Length (s)			60.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			105.5%				ICU Level of Service		G			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4478		1583	4529		1583	3108		1583	3102	
Flt Permitted	0.09	1.00		0.11	1.00		0.13	1.00		0.15	1.00	
Satd. Flow (perm)	153	4478		178	4529		215	3108		250	3102	
Volume (vph)	92	1159	137	52	2409	78	169	680	97	53	815	129
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	99	1246	147	56	2590	84	182	731	104	57	876	139
RTOR Reduction (vph)	0	14	0	0	3	0	0	11	0	0	13	0
Lane Group Flow (vph)	99	1379	0	56	2671	0	182	824	0	57	1002	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	51.0	44.6		49.8	44.0		40.0	32.0		35.2	29.6	
Effective Green, g (s)	49.0	43.6		47.8	43.0		38.0	31.0		33.2	28.6	
Actuated g/C Ratio	0.49	0.44		0.48	0.43		0.38	0.31		0.33	0.29	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	152	1952		153	1947		177	963		144	887	
v/s Ratio Prot	c0.04	0.31		0.02	c0.59		c0.07	0.27		0.02	c0.32	
v/s Ratio Perm	0.28			0.16			0.32			0.11		
v/c Ratio	0.65	0.71		0.37	1.37		1.03	0.86		0.40	1.13	
Uniform Delay, d1	23.4	23.0		16.0	28.5		27.9	32.4		24.5	35.7	
Progression Factor	2.14	2.01		1.31	1.51		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.0	1.7		0.2	168.7		75.2	9.6		0.7	72.6	
Delay (s)	56.0	48.1		21.3	211.7		103.2	42.0		25.2	108.3	
Level of Service	E	D		C	F		F	D		C	F	
Approach Delay (s)		48.6			207.8			53.0			103.9	
Approach LOS		D			F			D			F	

Intersection Summary

HCM Average Control Delay	127.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	113.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4485		1583	4542		1583	3083		1583	3103	
Flt Permitted	0.11	1.00		0.10	1.00		0.15	1.00		0.17	1.00	
Satd. Flow (perm)	183	4485		172	4542		255	3083		282	3103	
Volume (vph)	82	1477	156	183	2553	32	180	899	191	52	874	134
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	87	1571	166	195	2716	34	191	956	203	55	930	143
RTOR Reduction (vph)	0	14	0	0	1	0	0	19	0	0	13	0
Lane Group Flow (vph)	87	1723	0	195	2749	0	191	1140	0	55	1060	0
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt		pm+pt			
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	43.1	37.4		47.7	39.7		35.1	27.1		30.1	24.6	
Effective Green, g (s)	41.1	36.4		45.7	38.7		33.1	26.1		28.1	23.6	
Actuated g/C Ratio	0.46	0.40		0.51	0.43		0.37	0.29		0.31	0.26	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	157	1814		197	1953		197	894		153	814	
v/s Ratio Prot	0.03	0.38		c0.08	c0.61		c0.08	c0.37		0.02	0.34	
v/s Ratio Perm	0.22			0.42			0.28			0.09		
v/c Ratio	0.55	0.95		0.99	1.41		0.97	1.27		0.36	1.30	
Uniform Delay, d1	21.4	25.9		21.2	25.6		43.5	31.9		42.1	33.2	
Progression Factor	1.00	1.00		1.92	0.40		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.4	12.2		16.6	183.7		54.4	132.5		0.5	144.8	
Delay (s)	23.8	38.1		57.4	193.9		97.9	164.4		42.6	178.0	
Level of Service	C	D		E	F		F	F		D	F	
Approach Delay (s)		37.4			184.8			155.0			171.4	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	140.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	117.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑	↖	↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.98		1.00	1.00		1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	4466		1583	4542		1583	1667	1417	1583	2997	
Flt Permitted	0.09	1.00		0.10	1.00		0.12	1.00	1.00	0.13	1.00	
Satd. Flow (perm)	156	4466		174	4542		206	1667	1417	218	2997	
Volume (vph)	101	1165	164	70	2618	32	134	527	91	50	604	334
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	106	1226	173	74	2756	34	141	555	96	53	636	352
RTOR Reduction (vph)	0	18	0	0	1	0	0	0	65	0	75	0
Lane Group Flow (vph)	106	1381	0	74	2789	0	141	555	31	53	913	0
Turn Type	pm+pt		pm+pt		pm+pt		Perm		pm+pt			
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	50.6	43.8		48.2	42.6		40.4	33.4	33.4	36.8	31.6	
Effective Green, g (s)	48.6	42.8		46.2	41.6		38.4	32.4	32.4	34.8	30.6	
Actuated g/C Ratio	0.49	0.43		0.46	0.42		0.38	0.32	0.32	0.35	0.31	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	159	1911		145	1889		162	540	459	133	917	
v/s Ratio Prot	c0.04	0.31		0.02	c0.61		c0.05	c0.33		0.02	0.30	
v/s Ratio Perm	0.29			0.21			0.28		0.02	0.12		
v/c Ratio	0.67	0.72		0.51	1.48		0.87	1.03	0.07	0.40	1.00	
Uniform Delay, d1	23.3	23.7		17.2	29.2		24.8	33.8	23.4	25.1	34.6	
Progression Factor	0.82	1.12		2.11	1.71		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.9	2.1		0.1	214.6		35.5	46.0	0.3	0.7	28.7	
Delay (s)	25.9	28.7		36.5	264.7		60.3	79.8	23.6	25.8	63.3	
Level of Service	C	C		D	F		E	E	C	C	E	
Approach Delay (s)		28.5			258.8			69.5			61.4	
Approach LOS		C			F			E			E	

Intersection Summary

HCM Average Control Delay	145.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	115.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	2221		1118	2232		1118	2177		1118	2231	
Flt Permitted	0.07	1.00		0.10	1.00		0.28	1.00		0.66	1.00	
Satd. Flow (perm)	77	2221		117	2232		324	2177		781	2231	
Volume (vph)	27	1493	69	62	2073	22	7	112	23	114	499	7
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	28	1539	71	64	2137	23	7	115	24	118	514	7
RTOR Reduction (vph)	0	4	0	0	1	0	0	18	0	0	1	0
Lane Group Flow (vph)	28	1606	0	64	2159	0	7	121	0	118	520	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	60.5	60.5		60.5	60.5		20.8	20.8		20.8	20.8	
Effective Green, g (s)	61.0	61.0		61.0	61.0		21.0	21.0		21.0	21.0	
Actuated g/C Ratio	0.68	0.68		0.68	0.68		0.23	0.23		0.23	0.23	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	52	1505		79	1513		76	508		182	521	
v/s Ratio Prot		0.72			c0.97			0.06			c0.23	
v/s Ratio Perm	0.36			0.55			0.02			0.15		
v/c Ratio	0.54	1.07		0.81	1.43		0.09	0.24		0.65	1.00	
Uniform Delay, d1	7.4	14.5		10.4	14.5		27.0	28.0		31.2	34.5	
Progression Factor	0.35	0.36		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.6	32.0		57.9	196.0		2.4	1.1		16.5	39.1	
Delay (s)	6.2	37.2		68.3	210.5		29.4	29.1		47.7	73.6	
Level of Service	A	D		E	F		C	C		D	E	
Approach Delay (s)		36.7			206.4			29.1			68.8	
Approach LOS		D			F			C			E	

Intersection Summary

HCM Average Control Delay	122.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	128.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						0.95			0.95	
Frbp, ped/bikes		1.00						1.00			1.00	
Flpb, ped/bikes		0.98						1.00			1.00	
Frt		0.99						0.97			1.00	
Flt Protected		0.98						1.00			0.99	
Satd. Flow (prot)		3020						3072			3146	
Flt Permitted		0.98						1.00			0.90	
Satd. Flow (perm)		3020						3072			2850	
Volume (vph)	220	212	17	0	0	0	0	123	26	38	286	0
Peak-hour factor, PHF	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Adj. Flow (vph)	286	275	22	0	0	0	0	160	34	49	371	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	581	0	0	0	0	0	169	0	0	420	0
Conf. Peds. (#/hr)	28		18	18		28	6		7	7		6
Conf. Bikes (#/hr)			1						1			1
Turn Type	Perm						Perm					
Protected Phases		2						8			4	
Permitted Phases	2									4		
Actuated Green, G (s)		37.0						17.0			17.0	
Effective Green, g (s)		36.0						16.0			16.0	
Actuated g/C Ratio		0.60						0.27			0.27	
Clearance Time (s)		3.0						3.0			3.0	
Vehicle Extension (s)		5.0						3.0			3.0	
Lane Grp Cap (vph)		1812						819			760	
v/s Ratio Prot								0.06				
v/s Ratio Perm		0.19									c0.15	
v/c Ratio		0.32						0.21			0.55	
Uniform Delay, d1		5.9						17.1			18.9	
Progression Factor		1.09						1.00			1.00	
Incremental Delay, d2		0.4						0.6			2.9	
Delay (s)		6.9						17.6			21.8	
Level of Service		A						B			C	
Approach Delay (s)		6.9			0.0			17.6			21.8	
Approach LOS		A			A			B			C	
Intersection Summary												
HCM Average Control Delay			13.9					HCM Level of Service			B	
HCM Volume to Capacity ratio			0.39									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)		8.0		
Intersection Capacity Utilization			57.0%					ICU Level of Service		B		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑				↗		↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0				4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91				1.00		1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99				0.97		1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		0.98	1.00
Frt	1.00	1.00		1.00	0.98				0.86		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00				1.00		0.96	1.00
Satd. Flow (prot)	1583	4527		1583	4399				1396		1570	1371
Flt Permitted	0.95	1.00		0.95	1.00				1.00		0.96	1.00
Satd. Flow (perm)	1583	4527		1583	4399				1396		1570	1371
Volume (vph)	73	1321	26	103	2425	456	0	0	44	134	18	166
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	76	1376	27	107	2526	475	0	0	46	140	19	173
RTOR Reduction (vph)	0	2	0	0	24	0	0	0	35	0	0	133
Lane Group Flow (vph)	76	1401	0	107	2977	0	0	0	11	0	159	40
Confl. Peds. (#/hr)	18		42	42		18	15		14	14		15
Confl. Bikes (#/hr)			2			1			1			
Turn Type	Prot			Prot				custom	Perm		Perm	
Protected Phases	5	2		1	6						4	
Permitted Phases								8	4			4
Actuated Green, G (s)	8.0	57.5		9.5	59.0			24.0		24.0	24.0	
Effective Green, g (s)	7.0	56.5		8.5	58.0			23.0		23.0	23.0	
Actuated g/C Ratio	0.07	0.56		0.08	0.58			0.23		0.23	0.23	
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	111	2558		135	2551			321		361	315	
v/s Ratio Prot	0.05	0.31		c0.07	c0.68							
v/s Ratio Perm								0.01		0.10	0.03	
v/c Ratio	0.68	0.55		0.79	1.17			0.03		0.44	0.13	
Uniform Delay, d1	45.4	13.7		44.9	21.0			29.9		33.0	30.5	
Progression Factor	1.00	1.00		0.69	1.75			1.00		1.00	1.00	
Incremental Delay, d2	13.0	0.8		2.8	75.6			0.2		3.9	0.8	
Delay (s)	58.5	14.6		33.9	112.4			30.1		36.9	31.4	
Level of Service	E	B		C	F			C		D	C	
Approach Delay (s)		16.8			109.7			30.1		34.0		
Approach LOS		B			F			C		C		

Intersection Summary			
HCM Average Control Delay	76.2	HCM Level of Service	E
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	2230		1118	2233		1118	2219		1118	2203	
Flt Permitted	0.07	1.00		0.07	1.00		0.15	1.00		0.29	1.00	
Satd. Flow (perm)	84	2230		86	2233		181	2219		344	2203	
Volume (vph)	32	1602	25	221	1945	15	37	527	27	26	761	81
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	33	1635	26	226	1985	15	38	538	28	27	777	83
RTOR Reduction (vph)	0	1	0	0	1	0	0	4	0	0	9	0
Lane Group Flow (vph)	33	1660	0	226	1999	0	38	562	0	27	851	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			4		
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	55.5	55.5		55.5	55.5		25.8	25.8		25.8	25.8	
Effective Green, g (s)	56.0	56.0		56.0	56.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio	0.62	0.62		0.62	0.62		0.29	0.29		0.29	0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	52	1388		54	1389		52	641		99	636	
v/s Ratio Prot		0.74			0.90			0.25			c0.39	
v/s Ratio Perm	0.39			c2.62			0.21			0.08		
v/c Ratio	0.63	1.20		4.19	1.44		0.73	0.88		0.27	1.34	
Uniform Delay, d1	10.6	17.0		17.0	17.0		28.8	30.5		24.7	32.0	
Progression Factor	1.00	1.00		0.59	0.59		0.42	0.36		1.00	1.00	
Incremental Delay, d2	46.8	95.5		1437.3	198.1		28.5	6.7		6.7	162.4	
Delay (s)	57.4	112.5		1447.3	208.1		40.6	17.8		31.4	194.4	
Level of Service	E	F		F	F		D	B		C	F	
Approach Delay (s)		111.4			333.9			19.2			189.5	
Approach LOS		F			F			B			F	

Intersection Summary

HCM Average Control Delay	205.4	HCM Level of Service	F
HCM Volume to Capacity ratio	3.31		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	149.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00		0.95	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1118	2204		1118	2229		1118	2235	1000		2213	
Flt Permitted	0.07	1.00		0.25	1.00		0.15	1.00	1.00		1.00	
Satd. Flow (perm)	84	2204		292	2229		181	2235	1000		2213	
Volume (vph)	54	786	80	226	1714	35	65	502	96	0	918	66
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	873	89	251	1904	39	72	558	107	0	1020	73
RTOR Reduction (vph)	0	3	0	0	2	0	0	0	76	0	6	0
Lane Group Flow (vph)	60	959	0	251	1941	0	72	558	31	0	1087	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	55.5	55.5		55.5	55.5		25.8	25.8	25.8		25.8	
Effective Green, g (s)	56.0	56.0		56.0	56.0		26.0	26.0	26.0		26.0	
Actuated g/C Ratio	0.62	0.62		0.62	0.62		0.29	0.29	0.29		0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2	4.2		4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	52	1371		182	1387		52	646	289		639	
v/s Ratio Prot		0.44			c0.87			0.25			c0.49	
v/s Ratio Perm	0.71			0.86			0.40		0.03			
v/c Ratio	1.15	0.70		1.38	1.40		1.38	0.86	0.11		1.70	
Uniform Delay, d1	17.0	11.4		17.0	17.0		32.0	30.3	23.5		32.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		0.60	
Incremental Delay, d2	173.1	3.0		201.1	184.3		257.0	14.3	0.7		316.3	
Delay (s)	190.1	14.4		218.1	201.3		289.0	44.6	24.2		335.6	
Level of Service	F	B		F	F		F	D	C		F	
Approach Delay (s)		24.7			203.3			65.6			335.6	
Approach LOS		C			F			E			F	
Intersection Summary												
HCM Average Control Delay			175.6			HCM Level of Service			F			
HCM Volume to Capacity ratio			1.50									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			147.7%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						0.95			0.95	
Frbp, ped/bikes		0.99						0.98			1.00	
Flpb, ped/bikes		0.99						1.00			1.00	
Frt		0.94						0.97			1.00	
Flt Protected		1.00						1.00			0.99	
Satd. Flow (prot)		2919						2994			3144	
Flt Permitted		1.00						1.00			0.66	
Satd. Flow (perm)		2919						2994			2087	
Volume (vph)	35	181	139	0	0	0	0	766	212	86	710	0
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	38	199	153	0	0	0	0	842	233	95	780	0
RTOR Reduction (vph)	0	57	0	0	0	0	0	42	0	0	0	0
Lane Group Flow (vph)	0	333	0	0	0	0	0	1033	0	0	875	0
Conf. Peds. (#/hr)	123		3	3			123	1		108	108	1
Conf. Bikes (#/hr)							6			4		2
Turn Type		Perm									Perm	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		27.0						27.0			27.0	
Effective Green, g (s)		26.0						26.0			26.0	
Actuated g/C Ratio		0.43						0.43			0.43	
Clearance Time (s)		3.0						3.0			3.0	
Vehicle Extension (s)		3.0						3.0			3.0	
Lane Grp Cap (vph)		1265						1297			904	
v/s Ratio Prot								0.35				
v/s Ratio Perm		0.11									c0.42	
v/c Ratio		0.26						0.80			0.97	
Uniform Delay, d1		10.9						14.7			16.6	
Progression Factor		0.98						1.00			1.00	
Incremental Delay, d2		0.5						5.1			23.1	
Delay (s)		11.1						19.9			39.7	
Level of Service		B						B			D	
Approach Delay (s)		11.1			0.0			19.9			39.7	
Approach LOS		B			A			B			D	
Intersection Summary												
HCM Average Control Delay			25.8					HCM Level of Service			C	
HCM Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)		8.0		
Intersection Capacity Utilization			84.8%					ICU Level of Service		E		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕	↖		↕↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00		0.95	1.00
Frbp, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00	0.86		1.00	0.86
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1583	4338		1583	4476		1583	3167	1219		3167	1221
Flt Permitted	0.12	1.00		0.11	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	202	4338		180	4476		1583	3167	1219		3167	1221
Volume (vph)	61	1211	212	308	2142	91	286	893	121	0	789	191
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	64	1261	221	321	2231	95	298	930	126	0	822	199
RTOR Reduction (vph)	0	25	0	0	5	0	0	0	73	0	0	105
Lane Group Flow (vph)	64	1457	0	321	2321	0	298	930	53	0	822	94
Conf. Peds. (#/hr)	181		118	118		181	96		97	97		96
Conf. Bikes (#/hr)						3			1			1
Turn Type	pm+pt			pm+pt			Prot		Perm			Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases	2			6					8			4
Actuated Green, G (s)	39.0	34.0		50.0	42.0		14.9	41.9	41.9		23.9	23.9
Effective Green, g (s)	37.0	33.0		49.0	41.0		14.0	41.0	41.0		23.0	23.0
Actuated g/C Ratio	0.38	0.34		0.50	0.42		0.14	0.42	0.42		0.23	0.23
Clearance Time (s)	3.0	3.0		3.0	3.0		3.1	3.1	3.1		3.1	3.1
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	133	1461		262	1873		226	1325	510		743	287
v/s Ratio Prot	0.02	0.34		c0.15	c0.52		c0.19	0.29			c0.26	
v/s Ratio Perm	0.16			0.46					0.04			0.08
v/c Ratio	0.48	1.00		1.23	1.24		1.32	0.70	0.10		1.11	0.33
Uniform Delay, d1	47.0	32.5		27.6	28.5		42.0	23.5	17.3		37.5	31.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.0	22.9		130.4	112.5		171.0	3.1	0.4		66.1	3.0
Delay (s)	48.0	55.3		157.9	141.0		213.0	26.6	17.7		103.6	34.1
Level of Service	D	E		F	F		F	C	B		F	C
Approach Delay (s)		55.0			143.0			66.8			90.1	
Approach LOS		E			F			E			F	

Intersection Summary			
HCM Average Control Delay	98.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	98.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕		↕	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.95			0.98		1.00	1.00		1.00	0.99	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2986			3058		1583	3153		1583	3133	
Flt Permitted		0.85			0.75		0.13	1.00		0.12	1.00	
Satd. Flow (perm)		2558			2342		215	3153		198	3133	
Volume (vph)	29	107	69	209	272	55	119	1238	36	44	1023	78
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	30	110	71	215	280	57	123	1276	37	45	1055	80
RTOR Reduction (vph)	0	49	0	0	10	0	0	2	0	0	6	0
Lane Group Flow (vph)	0	162	0	0	542	0	123	1311	0	45	1129	0
Turn Type	Perm		Perm			pm+pt		pm+pt				
Protected Phases	4		8			5		2		1		6
Permitted Phases	4		8			2		6				
Actuated Green, G (s)	29.0		29.0			55.0		48.3		48.2		44.5
Effective Green, g (s)	28.0		28.0			53.8		47.3		46.2		43.5
Actuated g/C Ratio	0.31		0.31			0.60		0.53		0.51		0.48
Clearance Time (s)	3.0		3.0			3.0		3.0		3.0		3.0
Vehicle Extension (s)	3.0		3.0			2.0		5.0		2.0		5.0
Lane Grp Cap (vph)	796		729			227		1657		143		1514
v/s Ratio Prot						c0.04		c0.42		0.01		0.36
v/s Ratio Perm	0.06		c0.23			0.28		0.15				
v/c Ratio	0.20		0.74			0.54		0.79		0.31		0.75
Uniform Delay, d1	22.8		27.8			12.0		17.3		13.2		18.8
Progression Factor	1.00		1.00			1.00		1.00		1.00		1.00
Incremental Delay, d2	0.6		4.1			1.4		4.0		0.5		3.4
Delay (s)	23.4		31.9			13.4		21.3		13.7		22.2
Level of Service	C		C			B		C		B		C
Approach Delay (s)	23.4		31.9			20.6		21.9				
Approach LOS	C		C			C		C				

Intersection Summary

HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑			↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95			0.95	
Frt	1.00	0.99		1.00	1.00		1.00	0.99			0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1583	4524		1583	4550		1583	3135			3053	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1583	4524		1583	4550		1583	3135			3053	
Volume (vph)	30	1834	73	10	3153	0	40	715	51	0	398	125
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	30	1853	74	10	3185	0	40	722	52	0	402	126
RTOR Reduction (vph)	0	4	0	0	0	0	0	6	0	0	33	0
Lane Group Flow (vph)	30	1923	0	10	3185	0	40	768	0	0	495	0
Turn Type	Prot		Prot		Split							
Protected Phases	1!	2!		5!	6!		8	8				7
Permitted Phases												
Actuated Green, G (s)	5.0	34.0		4.8	33.2		14.0	14.0			22.0	
Effective Green, g (s)	4.5	33.5		4.8	33.2		14.0	14.0			22.0	
Actuated g/C Ratio	0.05	0.37		0.05	0.37		0.16	0.16			0.24	
Clearance Time (s)	3.5	3.5		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	79	1684		84	1678		246	488			746	
v/s Ratio Prot	c0.02	0.42		0.01	c0.70		0.03	c0.25			c0.16	
v/s Ratio Perm												
v/c Ratio	0.38	1.14		0.12	1.90		0.16	1.57			0.66	
Uniform Delay, d1	41.4	28.2		40.6	28.4		32.9	38.0			30.7	
Progression Factor	1.22	0.98		1.52	0.37		1.00	1.00			1.00	
Incremental Delay, d2	0.3	64.5		0.1	404.3		0.3	268.0			4.6	
Delay (s)	50.7	92.2		61.7	414.9		33.2	306.0			35.3	
Level of Service	D	F		E	F		C	F			D	
Approach Delay (s)		91.6			413.8			292.6			35.3	
Approach LOS		F			F			F			D	

Intersection Summary

HCM Average Control Delay	270.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↑	↑↑↑		↑	↑↑		↑	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt		0.99		1.00	0.99		1.00	0.99		1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4521		1583	4517		1583	3149		1583	3167	
Flt Permitted		1.00		0.95	1.00		0.31	1.00		0.18	1.00	
Satd. Flow (perm)		4521		1583	4517		519	3149		303	3167	
Volume (vph)	0	1790	81	26	2884	146	246	957	37	69	469	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1884	85	27	3036	154	259	1007	39	73	494	0
RTOR Reduction (vph)	0	5	0	0	6	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	1964	0	27	3184	0	259	1043	0	73	494	0
Turn Type				Prot			Perm			Perm		
Protected Phases		2!		5!	6		7		7		7	
Permitted Phases							7			7		
Actuated Green, G (s)		34.0		4.8	33.2		22.0	22.0		22.0	22.0	
Effective Green, g (s)		33.5		4.8	33.2		22.0	22.0		22.0	22.0	
Actuated g/C Ratio		0.37		0.05	0.37		0.24	0.24		0.24	0.24	
Clearance Time (s)		3.5		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1683		84	1666		127	770		74	774	
v/s Ratio Prot		0.43		c0.02	c0.70			0.33			0.16	
v/s Ratio Perm							c0.50			0.24		
v/c Ratio		1.17		0.32	1.91		2.04	1.35		0.99	0.64	
Uniform Delay, d1		28.2		41.0	28.4		34.0	34.0		33.9	30.4	
Progression Factor		0.29		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		75.8		2.2	412.4		494.0	168.0		100.9	4.0	
Delay (s)		83.8		43.2	440.8		528.0	202.0		134.8	34.4	
Level of Service		F		D	F		F	F		F	C	
Approach Delay (s)		83.8			437.4			266.7			47.4	
Approach LOS		F			F			F			D	

Intersection Summary

HCM Average Control Delay	275.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	30.0
Intersection Capacity Utilization	111.1%	ICU Level of Service	H
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕		↕	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0		4.0	4.0	
Lane Util. Factor		0.95						0.95		1.00	0.95	
Frbp, ped/bikes		1.00						0.97		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		0.95	1.00	
Frt		1.00						0.94		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		3133						2890		1507	3167	
Flt Permitted		1.00						1.00		0.64	1.00	
Satd. Flow (perm)		3133						2890		1013	3167	
Volume (vph)	16	310	5	0	0	0	0	93	62	59	429	0
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	19	360	6	0	0	0	0	108	72	69	499	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	53	0	0	0	0
Lane Group Flow (vph)	0	384	0	0	0	0	0	127	0	69	499	0
Conf. Peds. (#/hr)	51		52	52			51	5		55	55	
Conf. Bikes (#/hr)							3					5
Turn Type		Perm									Perm	
Protected Phases		2						4			4	
Permitted Phases		2									4	
Actuated Green, G (s)		17.0						17.0		17.0	17.0	
Effective Green, g (s)		16.0						16.0		16.0	16.0	
Actuated g/C Ratio		0.27						0.27		0.27	0.27	
Clearance Time (s)		3.0						3.0		3.0	3.0	
Vehicle Extension (s)		5.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		835						771		270	845	
v/s Ratio Prot								0.04			c0.16	
v/s Ratio Perm		0.12								0.07		
v/c Ratio		0.46						0.16		0.26	0.59	
Uniform Delay, d1		18.4						16.9		17.3	19.1	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		1.8						0.5		2.3	3.0	
Delay (s)		20.2						17.3		19.6	22.2	
Level of Service		C						B		B	C	
Approach Delay (s)		20.2			0.0			17.3			21.9	
Approach LOS		C			A			B			C	
Intersection Summary												
HCM Average Control Delay			20.6					HCM Level of Service			C	
HCM Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)		28.0		
Intersection Capacity Utilization			83.0%					ICU Level of Service		E		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗			↗↗↗		↗	↗		↗	↗	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91			0.91		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00			0.99		1.00	0.90		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			1.00		0.84	1.00		1.00	1.00	1.00
Frt	1.00	1.00			1.00		1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4525			4511		1334	1420		1583	1667	1102
Flt Permitted	0.08	1.00			1.00		0.62	1.00		0.95	1.00	1.00
Satd. Flow (perm)	130	4525			4511		872	1420		1583	1667	1102
Volume (vph)	39	1261	14	0	2483	47	105	76	42	92	211	110
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	41	1314	15	0	2586	49	109	79	44	96	220	115
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	0	0	0	0
Lane Group Flow (vph)	41	1328	0	0	2633	0	109	123	0	96	220	115
Confl. Peds. (#/hr)	244		131	131		244	166		211	211		166
Confl. Bikes (#/hr)			3			5			2			3
Turn Type	Perm			Perm			Prot			custom		
Protected Phases	2			6			8			7		
Permitted Phases	2						8			4 4		
Actuated Green, G (s)	52.2	52.2			52.2		21.0	21.0		7.8	31.8	31.8
Effective Green, g (s)	51.2	51.2			51.2		20.0	20.0		6.8	30.8	30.8
Actuated g/C Ratio	0.57	0.57			0.57		0.22	0.22		0.08	0.34	0.34
Clearance Time (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Vehicle Extension (s)	5.0	5.0			5.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	2574			2566		194	316		120	570	377
v/s Ratio Prot		0.29			c0.58			0.09		c0.06		
v/s Ratio Perm	0.31						c0.13				0.13	0.10
v/c Ratio	0.55	0.52			1.03		0.56	0.39		0.80	0.39	0.31
Uniform Delay, d1	12.2	11.8			19.4		31.1	29.8		40.9	22.4	21.7
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	26.7	0.7			24.8		11.3	3.6		30.5	2.0	2.1
Delay (s)	38.9	12.6			44.2		42.4	33.4		71.4	24.4	23.8
Level of Service	D	B			D		D	C		E	C	C
Approach Delay (s)		13.4			44.2			37.6			34.7	
Approach LOS		B			D			D			C	

Intersection Summary

HCM Average Control Delay	33.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			






























Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR2	
Lane Configurations		↔	↔↔↔		↔	↔↔↔			↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	
Total Lost time (s)		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00	
Frbp, ped/bikes		1.00	1.00		1.00	0.99			1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	
Frt		1.00	1.00		1.00	0.99			0.86	
Flt Protected		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)		1583	4521		1583	4482			1442	
Flt Permitted		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)		1583	4521		1583	4482			1442	
Volume (vph)	343	249	1313	36	573	1919	42	41	101	
Peak-hour factor, PHF	0.92	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.92	
Adj. Flow (vph)	373	259	1368	38	597	1999	44	43	110	
RTOR Reduction (vph)	0	0	3	0	0	2	0	0	97	
Lane Group Flow (vph)	0	632	1403	0	597	2084	0	0	13	
Conf. Peds. (#/hr)	63	81		28	28		63	81	35	
Conf. Bikes (#/hr)				5			9	10	1	
Turn Type	Prot	Prot			Prot				custom	
Protected Phases	1	1	2		8	6			1	
Permitted Phases										
Actuated Green, G (s)		13.0	52.0		26.0	81.0			13.0	
Effective Green, g (s)		12.0	51.0		25.0	80.0			12.0	
Actuated g/C Ratio		0.12	0.51		0.25	0.80			0.12	
Clearance Time (s)		3.0	3.0		3.0	3.0			3.0	
Vehicle Extension (s)		2.5	5.0		3.0	5.0			2.5	
Lane Grp Cap (vph)		190	2306		396	3586			173	
v/s Ratio Prot		c0.40	0.31		c0.38	c0.46			0.01	
v/s Ratio Perm										
v/c Ratio		3.33	0.61		1.51	0.58			0.08	
Uniform Delay, d1		44.0	17.4		37.5	3.7			39.1	
Progression Factor		1.25	1.95		1.00	1.00			1.00	
Incremental Delay, d2		1048.1	0.1		241.2	0.7			0.1	
Delay (s)		1103.0	34.1		278.7	4.4			39.2	
Level of Service		F	C		F	A			D	
Approach Delay (s)			365.6			65.5				
Approach LOS			F			E				
Intersection Summary										
HCM Average Control Delay			191.5						HCM Level of Service	F
HCM Volume to Capacity ratio			1.18							
Actuated Cycle Length (s)			100.0						Sum of lost time (s)	8.0
Intersection Capacity Utilization			102.5%						ICU Level of Service	G
Analysis Period (min)			15							
c	Critical Lane Group									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↖↗↘		↗	↖↗↘			↕	↗		↖↗↘	↗
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	0.86	0.86		1.00	0.91			0.95	1.00		0.86	0.86
Frt	1.00	1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	961	3015		1118	3199			2235	1000		3035	860
Flt Permitted	0.95	0.69		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	961	2085		1118	3199			2235	1000		3035	860
Volume (vph)	734	1815	16	251	1855	52	0	995	144	0	1700	757
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	765	1891	17	261	1932	54	0	1036	150	0	1771	789
RTOR Reduction (vph)	0	1	0	0	3	0	0	0	107	0	0	319
Lane Group Flow (vph)	531	2141	0	261	1983	0	0	1036	44	0	1771	470
Turn Type	Prot		Prot				Perm				Over	
Protected Phases	7	4		3	8			2			6	7
Permitted Phases							2					
Actuated Green, G (s)	20.9	36.4		20.9	36.4			28.4	28.4		28.4	20.9
Effective Green, g (s)	22.0	37.0		22.0	37.0			29.0	29.0		29.0	22.0
Actuated g/C Ratio	0.22	0.37		0.22	0.37			0.29	0.29		0.29	0.22
Clearance Time (s)	5.1	4.6		5.1	4.6			4.6	4.6		4.6	5.1
Vehicle Extension (s)	3.0	3.0		5.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	211	976		246	1184			648	290		880	189
v/s Ratio Prot	c0.55	0.48		0.23	c0.62			0.46			c0.58	0.55
v/s Ratio Perm	c0.33						0.04					
v/c Ratio	2.52	2.19		1.06	1.67			1.60	0.15		2.01	2.49
Uniform Delay, d1	39.0	31.5		39.0	31.5			35.5	26.4		35.5	39.0
Progression Factor	1.00	1.00		1.05	0.58			1.00	1.00		1.00	1.00
Incremental Delay, d2	696.3	540.7		36.1	304.0			276.7	1.1		459.7	684.6
Delay (s)	735.3	572.2		77.0	322.1			312.2	27.4		495.2	723.6
Level of Service	F	F		E	F			F	C		F	F
Approach Delay (s)	604.6		293.6		276.2		565.6					
Approach LOS	F		F		F		F					

Intersection Summary

HCM Average Control Delay	467.5	HCM Level of Service	F
HCM Volume to Capacity ratio	2.15		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	189.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			  	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85	1.00	0.95	
Flt Protected		0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3155		1118	3208		1118	2235	1000	1118	2129	
Flt Permitted		0.72		0.95	1.00		0.14	1.00	1.00	0.37	1.00	
Satd. Flow (perm)		2293		1118	3208		162	2235	1000	437	2129	
Volume (vph)	469	1313	63	252	1504	13	64	434	288	27	891	414
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	494	1382	66	265	1583	14	67	457	303	28	938	436
RTOR Reduction (vph)	0	4	0	0	1	0	0	0	215	0	55	0
Lane Group Flow (vph)	0	1938	0	265	1596	0	67	457	88	28	1319	0
Turn Type		Prot		Prot			Perm		Perm	Perm		
Protected Phases		7	4		3	8			2			6
Permitted Phases								2		2		6
Actuated Green, G (s)		36.4		20.9	36.4		28.4	28.4	28.4	28.4		28.4
Effective Green, g (s)		37.0		22.0	37.0		29.0	29.0	29.0	29.0		29.0
Actuated g/C Ratio		0.37		0.22	0.37		0.29	0.29	0.29	0.29		0.29
Clearance Time (s)		4.6		5.1	4.6		4.6	4.6	4.6	4.6		4.6
Vehicle Extension (s)		3.0		5.0	3.0		3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		1038		246	1187		47	648	290	127	617	
v/s Ratio Prot		c0.41		0.24	c0.50			0.20				c0.62
v/s Ratio Perm		c0.28					0.41		0.09	0.06		
v/c Ratio		1.87		1.08	1.34		1.43	0.71	0.30	0.22	2.14	
Uniform Delay, d1		31.5		39.0	31.5		35.5	31.7	27.6	26.9	35.5	
Progression Factor		0.61		0.93	1.39		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		390.6		74.0	159.9		279.4	6.3	2.7	4.0	517.7	
Delay (s)		409.7		110.1	203.5		314.9	38.0	30.3	30.9	553.2	
Level of Service		F		F	F		F	D	C	C	F	
Approach Delay (s)		409.7			190.2			57.6			542.7	
Approach LOS		F			F			E			F	
Intersection Summary												
HCM Average Control Delay			324.6			HCM Level of Service			F			
HCM Volume to Capacity ratio			1.83									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			189.7%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.86	0.97	0.88
Frbp, ped/bikes		1.00	0.97	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)		4047	968	2168	4047	2168	1760
Flt Permitted		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)		4047	968	2168	4047	2168	1760
Volume (vph)	0	1612	561	1261	2139	213	471
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1662	578	1300	2205	220	486
RTOR Reduction (vph)	0	0	49	0	0	0	348
Lane Group Flow (vph)	0	1662	529	1300	2205	220	138
Conf. Peds. (#/hr)			33	33			38
Conf. Bikes (#/hr)			14				1
Turn Type	Prot		pm+ov	Prot			Over
Protected Phases	1	6	4	3	2 3	4	3
Permitted Phases			6				
Actuated Green, G (s)		39.0	69.1	35.0	80.0	30.1	35.0
Effective Green, g (s)		41.0	74.0	34.0	79.0	33.0	34.0
Actuated g/C Ratio		0.34	0.62	0.28	0.66	0.28	0.28
Clearance Time (s)		6.0	6.9	3.0		6.9	3.0
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1383	629	614	2664	596	499
v/s Ratio Prot		c0.41	c0.23	c0.60	0.54	0.10	0.08
v/s Ratio Perm			0.32				
v/c Ratio		1.20	0.84	2.12	0.83	0.37	0.28
Uniform Delay, d1		39.5	18.3	43.0	15.4	35.1	33.4
Progression Factor		0.43	1.45	1.00	1.00	1.00	1.00
Incremental Delay, d2		94.0	4.6	508.3	2.2	0.4	0.3
Delay (s)		111.2	31.3	551.3	17.6	35.5	33.7
Level of Service		F	C	F	B	D	C
Approach Delay (s)		90.6			215.6	34.3	
Approach LOS		F			F	C	

Intersection Summary

HCM Average Control Delay	152.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	123.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔↔		↔		↔	↔↔↔		↔	↔↔	↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0				4.0	4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	0.88				1.00	0.91			0.95	1.00
Frt	1.00	1.00	0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1504	1504	2493				1583	4550			3167	1417
Flt Permitted	0.95	0.95	1.00				0.47	1.00			1.00	1.00
Satd. Flow (perm)	1504	1504	2493				787	4550			3167	1417
Volume (vph)	153	0	84	0	0	0	432	1220	0	0	375	556
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	174	0	95	0	0	0	491	1386	0	0	426	632
RTOR Reduction (vph)	0	0	80	0	0	0	0	0	0	0	0	484
Lane Group Flow (vph)	87	87	15	0	0	0	491	1386	0	0	426	148
Turn Type	Split		custom				pm+pt			Perm		Over
Protected Phases	4	4	7 1		3		5	2			6	4
Permitted Phases							2			6		
Actuated Green, G (s)	16.5	16.5	13.3				46.8	41.8			41.8	16.5
Effective Green, g (s)	17.1	17.1	13.9				48.0	43.0			43.0	17.1
Actuated g/C Ratio	0.19	0.19	0.15				0.53	0.48			0.48	0.19
Clearance Time (s)	4.6	4.6					4.0	5.2			5.2	4.6
Vehicle Extension (s)	3.0	3.0					3.0	3.2			3.4	3.0
Lane Grp Cap (vph)	286	286	385				464	2174			1513	269
v/s Ratio Prot	0.06	0.06	c0.01				c0.06	0.30			0.13	c0.10
v/s Ratio Perm							c0.51					
v/c Ratio	0.30	0.30	0.04				1.06	0.64			0.28	0.55
Uniform Delay, d1	31.3	31.3	32.4				20.0	17.6			14.2	33.0
Progression Factor	0.93	0.93	1.17				1.22	1.15			1.00	1.00
Incremental Delay, d2	0.7	0.7	0.0				54.0	1.2			0.5	7.9
Delay (s)	30.0	30.0	37.8				78.5	21.4			14.6	40.9
Level of Service	C	C	D				E	C			B	D
Approach Delay (s)		32.7			0.0			36.3			30.3	
Approach LOS		C			A			D			C	

Intersection Summary			
HCM Average Control Delay		34.0	HCM Level of Service C
HCM Volume to Capacity ratio		0.82	
Actuated Cycle Length (s)		90.0	Sum of lost time (s) 16.0
Intersection Capacity Utilization		71.9%	ICU Level of Service C
Analysis Period (min)		15	
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑		↑↑	↑↑↑		↑↑	↑↑	↑↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.86		0.97	0.91		0.97	0.95	0.88
Frt		1.00	0.85		0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		4550	1417		5603		3072	4453		3072	3167	2493
Flt Permitted		1.00	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		4550	1417		5603		3072	4453		3072	3167	2493
Volume (vph)	0	2007	113	0	2954	528	450	580	96	455	485	385
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	2048	115	0	3014	539	459	592	98	464	495	393
RTOR Reduction (vph)	0	0	52	0	36	0	0	2	0	0	0	3
Lane Group Flow (vph)	0	2048	63	0	3517	0	459	688	0	464	495	390
Turn Type		pm+ov					Prot			Prot		Perm
Protected Phases		6	3		2		3	8		7	4	
Permitted Phases		6										4
Actuated Green, G (s)		35.5	47.5		35.5		12.0	27.7		12.0	27.7	27.7
Effective Green, g (s)		37.0	49.0		37.0		12.0	29.0		12.0	29.0	29.0
Actuated g/C Ratio		0.41	0.54		0.41		0.13	0.32		0.13	0.32	0.32
Clearance Time (s)		5.5	4.0		5.5		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)		4.9	3.0		5.2		3.0	5.1		3.0	5.1	5.1
Lane Grp Cap (vph)		1871	834		2303		410	1435		410	1020	803
v/s Ratio Prot		0.45	0.01		c0.63		0.15	0.15		c0.15	0.16	
v/s Ratio Perm		0.03										c0.16
v/c Ratio		1.09	0.08		1.53		1.12	0.48		1.13	0.49	0.49
Uniform Delay, d1		26.5	9.7		26.5		39.0	24.4		39.0	24.5	24.5
Progression Factor		1.00	1.00		0.33		1.00	1.00		0.97	0.81	0.80
Incremental Delay, d2		51.7	0.0		237.4		81.1	1.1		85.4	0.8	1.0
Delay (s)		78.2	9.8		246.3		120.1	25.6		123.3	20.6	20.7
Level of Service		E	A		F		F	C		F	C	C
Approach Delay (s)		74.6			246.3		63.3			55.9		
Approach LOS		E			F		E			E		

Intersection Summary

HCM Average Control Delay	144.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	⬇	↑↑↑	↗	↘↘	↑↑↑	↙↙↙	↖↖
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.86	1.00	0.97	0.91	0.94	0.88
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1118	4047	1000	2168	3212	3152	1760
Flt Permitted	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1118	4047	1000	2168	3212	3152	1760
Volume (vph)	8	1707	780	318	1977	340	469
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	8	1724	788	321	1997	343	474
RTOR Reduction (vph)	0	0	492	0	0	0	370
Lane Group Flow (vph)	8	1724	296	321	1997	343	104
Conf. Peds. (#/hr)			55	55		1	217
Conf. Bikes (#/hr)			15				7
Turn Type	Prot		Over	Prot		Over	
Protected Phases	1	6	8	5	2	8	5
Permitted Phases							
Actuated Green, G (s)	1.0	46.0	30.1	26.3	70.3	30.1	26.3
Effective Green, g (s)	2.0	48.7	33.0	26.3	73.0	33.0	26.3
Actuated g/C Ratio	0.02	0.41	0.28	0.22	0.61	0.28	0.22
Clearance Time (s)	5.0	6.7	6.9	4.0	6.7	6.9	4.0
Vehicle Extension (s)	3.0	5.0	3.0	3.0	5.0	3.0	3.0
Lane Grp Cap (vph)	19	1642	275	475	1954	867	386
v/s Ratio Prot	0.01	c0.43	c0.30	0.15	c0.62	0.11	0.06
v/s Ratio Perm							
v/c Ratio	0.42	1.05	1.08	0.68	1.02	0.40	0.27
Uniform Delay, d1	58.4	35.6	43.5	42.9	23.5	35.4	38.9
Progression Factor	0.49	1.36	6.24	1.09	1.33	1.00	1.00
Incremental Delay, d2	1.4	24.4	40.9	2.3	21.6	0.3	0.4
Delay (s)	30.1	73.0	312.2	49.2	52.9	35.7	39.3
Level of Service	C	E	F	D	D	D	D
Approach Delay (s)		147.7			52.4	37.8	
Approach LOS		F			D	D	
Intersection Summary							
HCM Average Control Delay			92.7		HCM Level of Service		F
HCM Volume to Capacity ratio			1.04				
Actuated Cycle Length (s)			120.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization			101.7%		ICU Level of Service		G
Analysis Period (min)			15				
c Critical Lane Group							



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↘↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	0.97	0.91	
Frbp, ped/bikes	1.00	1.00	0.95	1.00	1.00	0.90	1.00	1.00	0.90	1.00	0.93	
Flpb, ped/bikes	0.99	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1569	3167	1349	1559	3167	1271	3072	4550	1274	3072	3849	
Flt Permitted	0.30	1.00	1.00	0.33	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	493	3167	1349	541	3167	1271	3072	4550	1274	3072	3849	
Volume (vph)	102	725	156	257	485	97	258	1299	609	244	146	210
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	115	815	175	289	545	109	290	1460	684	274	164	236
RTOR Reduction (vph)	0	0	75	0	0	73	0	0	54	0	166	0
Lane Group Flow (vph)	115	815	100	289	545	36	290	1460	630	274	234	0
Confl. Peds. (#/hr)	96		51	51		96	93		76	76		93
Confl. Bikes (#/hr)			2						2			5
Turn Type	pm+pt		pm+ov	Perm		Perm	Prot		Perm	Prot		
Protected Phases	1	6	3		2		3	8		7	4	
Permitted Phases	6		6	2		2			8			
Actuated Green, G (s)	38.8	38.8	49.9	28.5	28.5	28.5	11.1	26.2	26.2	11.0	26.1	
Effective Green, g (s)	40.3	40.3	51.4	30.0	30.0	30.0	11.1	26.7	26.7	11.0	26.6	
Actuated g/C Ratio	0.45	0.45	0.57	0.33	0.33	0.33	0.12	0.30	0.30	0.12	0.30	
Clearance Time (s)	3.5	5.5	4.0	5.5	5.5	5.5	4.0	4.5	4.5	4.0	4.5	
Vehicle Extension (s)	3.0	4.0	2.0	4.0	4.0	4.0	2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	296	1418	830	180	1056	424	379	1350	378	375	1138	
v/s Ratio Prot	0.03	c0.26	0.01		0.17		0.09	0.32		c0.09	0.06	
v/s Ratio Perm	0.15		0.06	c0.53		0.03			c0.49			
v/c Ratio	0.39	0.57	0.12	1.61	0.52	0.09	0.77	1.08	1.67	0.73	0.21	
Uniform Delay, d1	15.7	18.5	8.9	30.0	24.2	20.6	38.2	31.6	31.6	38.1	23.8	
Progression Factor	1.46	1.44	4.26	1.07	1.06	1.29	1.04	0.75	0.70	1.00	1.00	
Incremental Delay, d2	0.5	0.4	0.0	274.9	0.1	0.0	5.4	45.9	307.4	6.2	0.4	
Delay (s)	23.3	27.0	37.9	306.9	25.7	26.6	45.2	69.7	329.5	44.3	24.2	
Level of Service	C	C	D	F	C	C	D	E	F	D	C	
Approach Delay (s)		28.3			112.0			139.8			32.4	
Approach LOS		C			F			F			C	

Intersection Summary			
HCM Average Control Delay	96.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↘	↑↑↑	↗	↘	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)					4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor					1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frt					1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected					0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)					1583	1417	1583	4550	1417	1583	4550	
Flt Permitted					0.76	1.00	0.38	1.00	1.00	0.07	1.00	
Satd. Flow (perm)					1262	1417	630	4550	1417	115	4550	
Volume (vph)	0	0	0	152	0	285	2	1901	43	16	598	0
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	171	0	320	2	2136	48	18	672	0
RTOR Reduction (vph)	0	0	0	0	0	6	0	0	17	0	0	0
Lane Group Flow (vph)	0	0	0	0	171	314	2	2136	31	18	672	0
Turn Type	Perm			Perm			Perm	Perm	Perm		Perm	
Protected Phases	4			4			4		2		2	
Permitted Phases	4			4			4		2		2	
Actuated Green, G (s)				23.0			23.0	57.0	57.0	57.0	57.0	57.0
Effective Green, g (s)				24.0			24.0	58.0	58.0	58.0	58.0	58.0
Actuated g/C Ratio				0.27			0.27	0.64	0.64	0.64	0.64	0.64
Clearance Time (s)				5.0			5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)				3.0			3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)				337			378	406	2932	913	74	2932
v/s Ratio Prot							c0.47				0.15	
v/s Ratio Perm				0.14			c0.22	0.00	0.02		0.16	
v/c Ratio				0.51			0.83	0.00	0.73	0.03	0.24	0.23
Uniform Delay, d1				28.0			31.1	5.7	10.7	5.8	6.7	6.7
Progression Factor				1.00			1.00	0.45	0.71	0.36	0.85	0.86
Incremental Delay, d2				1.2			14.3	0.0	1.1	0.0	4.8	0.1
Delay (s)				29.2			45.4	2.6	8.7	2.1	10.5	5.9
Level of Service				C			D	A	A	A	B	A
Approach Delay (s)	0.0			39.8			8.6				6.0	
Approach LOS	A			D			A				A	

Intersection Summary

HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕	↗	↖	↕↕↕		↖↖	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95	0.95	1.00	0.91		0.97	0.91	
Frt		0.92			0.94	0.85	1.00	0.99		1.00	0.97	
Flt Protected		0.98			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2855			1457	1346	1583	4489		3072	4410	
Flt Permitted		0.88			0.85	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2544			1267	1346	1583	4489		3072	4410	
Volume (vph)	5	2	9	93	36	419	57	1484	144	39	581	150
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	6	2	10	106	41	476	65	1686	164	44	660	170
RTOR Reduction (vph)	0	8	0	0	32	2	0	10	0	0	38	0
Lane Group Flow (vph)	0	10	0	0	213	376	65	1840	0	44	792	0
Turn Type	Perm		Perm		pm+ov		Prot		Prot			
Protected Phases	8		4		4	5	1	6	5		2	
Permitted Phases	8		4		4							
Actuated Green, G (s)	19.3				19.3	27.5	7.9	48.3	8.2		48.6	
Effective Green, g (s)	20.8				20.8	29.0	7.9	49.0	8.2		49.3	
Actuated g/C Ratio	0.23				0.23	0.32	0.09	0.54	0.09		0.55	
Clearance Time (s)	5.5				5.5	4.0	4.0	4.7	4.0		4.7	
Vehicle Extension (s)	3.0				3.0	3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	588				293	494	139	2444	280		2416	
v/s Ratio Prot					c0.07		0.04	c0.41	0.01		0.18	
v/s Ratio Perm	0.00				0.17	0.21						
v/c Ratio	0.02				0.73	0.76	0.47	0.75	0.16		0.33	
Uniform Delay, d1	26.7				32.0	27.4	39.0	15.8	37.7		11.2	
Progression Factor	1.00				1.00	1.00	1.39	0.26	0.80		1.66	
Incremental Delay, d2	0.0				8.7	6.8	1.2	1.1	0.3		0.4	
Delay (s)	26.7				40.7	34.2	55.4	5.2	30.5		19.0	
Level of Service	C				D	C	E	A	C		B	
Approach Delay (s)	26.7				36.8		6.9				19.6	
Approach LOS	C				D		A				B	

Intersection Summary

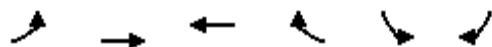
HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔		↔	↔		↔	↔↔	↔↔↔		↔	↔↔↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97		1.00	1.00		1.00	0.97	0.91		1.00	0.91	
Frt	1.00		0.85	1.00		0.85	1.00	1.00		1.00	0.95	
Flt Protected	0.95		1.00	0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3072		1417	1583		1417	3072	4534		1583	4312	
Flt Permitted	0.95		1.00	0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3072		1417	1583		1417	3072	4534		1583	4312	
Volume (vph)	14	0	12	26	0	103	210	1593	38	14	440	235
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	17	0	15	32	0	127	259	1967	47	17	543	290
RTOR Reduction (vph)	0	0	13	0	0	83	0	2	0	0	96	0
Lane Group Flow (vph)	17	0	2	32	0	44	259	2012	0	17	737	0
Turn Type	Prot		custom	Prot		custom	Prot			Prot		
Protected Phases	3		3 5	4		1 4	5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	3.8		13.8	20.3		31.8	10.0	41.4		6.6	38.0	
Effective Green, g (s)	4.7		13.9	21.2		31.0	9.2	42.3		5.8	38.9	
Actuated g/C Ratio	0.05		0.15	0.24		0.34	0.10	0.47		0.06	0.43	
Clearance Time (s)	4.9			4.9			3.2	4.9		3.2	4.9	
Vehicle Extension (s)	3.0			3.0			3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	160		219	373		488	314	2131		102	1864	
v/s Ratio Prot	c0.01		0.00	0.02		c0.03	c0.08	c0.44		0.01	0.17	
v/s Ratio Perm												
v/c Ratio	0.11		0.01	0.09		0.09	0.82	0.94		0.17	0.40	
Uniform Delay, d1	40.6		32.2	26.8		20.0	39.6	22.7		39.8	17.5	
Progression Factor	1.00		1.00	1.00		1.00	1.46	0.56		1.24	0.51	
Incremental Delay, d2	0.3		0.0	0.1		0.1	1.7	1.2		0.7	0.6	
Delay (s)	40.9		32.2	26.9		20.0	59.6	14.0		50.2	9.5	
Level of Service	D		C	C		C	E	B		D	A	
Approach Delay (s)		36.9			21.4			19.2			10.3	
Approach LOS		D			C			B			B	

Intersection Summary

HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↗	↑↑↑	↑↑↑↗		↖↗	↘↙
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.91	0.91		0.97	0.88
Frt	1.00	1.00	0.96		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3072	4550	4374		3072	2493
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3072	4550	4374		3072	2493
Volume (vph)	1310	1757	1554	541	117	234
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1456	1952	1727	601	130	260
RTOR Reduction (vph)	0	0	62	0	0	188
Lane Group Flow (vph)	1456	1952	2266	0	130	72
Turn Type	Prot				Prot	
Protected Phases	5	2 5	6		4	4
Permitted Phases						
Actuated Green, G (s)	12.0	55.5	38.5		24.0	24.0
Effective Green, g (s)	13.0	57.0	40.0		25.0	25.0
Actuated g/C Ratio	0.14	0.63	0.44		0.28	0.28
Clearance Time (s)	5.0		5.5		5.0	5.0
Vehicle Extension (s)	2.0		3.0		3.0	3.0
Lane Grp Cap (vph)	444	2882	1944		853	693
v/s Ratio Prot	c0.47	0.43	c0.52		c0.04	0.03
v/s Ratio Perm						
v/c Ratio	3.28	0.68	1.17		0.15	0.10
Uniform Delay, d1	38.5	10.6	25.0		24.5	24.2
Progression Factor	1.00	1.00	1.00		1.40	3.97
Incremental Delay, d2	1031.5	1.3	80.5		0.1	0.1
Delay (s)	1070.0	11.9	105.5		34.3	96.0
Level of Service	F	B	F		C	F
Approach Delay (s)		463.9	105.5		75.5	
Approach LOS		F	F		E	

Intersection Summary

HCM Average Control Delay	303.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	103.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↓	↑↑↑	↑↓	↑
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	0.97	0.91
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3212	1000	2168	3212	2168	910
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3212	1000	2168	3212	2168	910
Volume (vph)	2484	882	239	2035	340	111
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	2535	900	244	2077	347	113
RTOR Reduction (vph)	0	320	0	0	0	85
Lane Group Flow (vph)	2535	581	244	2077	347	28
Confl. Peds. (#/hr)		59	59		11	
Confl. Bikes (#/hr)		14				
Turn Type		Over	Prot			Perm
Protected Phases	6	4	5	2	4	
Permitted Phases						4
Actuated Green, G (s)	60.0	28.1	16.8	80.8	28.1	28.1
Effective Green, g (s)	61.2	30.0	16.8	82.0	30.0	30.0
Actuated g/C Ratio	0.51	0.25	0.14	0.68	0.25	0.25
Clearance Time (s)	5.2	5.9	4.0	5.2	5.9	5.9
Vehicle Extension (s)	3.7	3.8	1.0	3.5	3.8	3.8
Lane Grp Cap (vph)	1638	250	304	2195	542	228
v/s Ratio Prot	c0.79	c0.58	0.11	c0.65	0.16	
v/s Ratio Perm						0.03
v/c Ratio	1.55	2.32	0.80	0.95	0.64	0.12
Uniform Delay, d1	29.4	45.0	50.0	17.0	40.2	34.8
Progression Factor	1.63	1.55	1.25	0.58	1.00	1.00
Incremental Delay, d2	246.7	596.0	6.4	5.3	5.7	1.1
Delay (s)	294.7	665.9	68.9	15.1	45.9	35.9
Level of Service	F	F	E	B	D	D
Approach Delay (s)	392.0			20.8	43.4	
Approach LOS	F			C	D	

Intersection Summary

HCM Average Control Delay	227.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

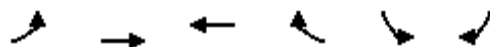


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↔↔	↑↑	↔	↔	↑↑↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.88	0.95	1.00	1.00	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3072	2493	3167	1417	1583	4550
Flt Permitted	0.95	1.00	1.00	1.00	0.52	1.00
Satd. Flow (perm)	3072	2493	3167	1417	861	4550
Volume (vph)	66	296	298	430	691	311
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	329	331	478	768	346
RTOR Reduction (vph)	0	289	0	12	0	0
Lane Group Flow (vph)	73	40	331	466	768	346
Turn Type		Perm		pm+ov	pm+pt	
Protected Phases	4		2	4	1	6
Permitted Phases		4		2	6	
Actuated Green, G (s)	10.4	10.4	56.6	67.0	69.6	69.6
Effective Green, g (s)	10.9	10.9	58.1	69.0	71.1	71.1
Actuated g/C Ratio	0.12	0.12	0.65	0.77	0.79	0.79
Clearance Time (s)	4.5	4.5	5.5	4.5	3.0	5.5
Vehicle Extension (s)	3.0	3.0	5.0	3.0	3.0	5.0
Lane Grp Cap (vph)	372	302	2044	1149	752	3595
v/s Ratio Prot	0.02		0.10	c0.05	c0.10	0.08
v/s Ratio Perm		0.02		0.28	c0.70	
v/c Ratio	0.20	0.13	0.16	0.41	1.02	0.10
Uniform Delay, d1	35.6	35.3	6.3	3.6	8.0	2.1
Progression Factor	0.73	1.90	0.11	2.78	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.0	0.0	38.3	0.1
Delay (s)	26.2	67.3	0.7	9.9	46.3	2.2
Level of Service	C	E	A	A	D	A
Approach Delay (s)	59.8		6.2			32.6
Approach LOS	E		A			C

Intersection Summary

HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
75: Olympic Blvd & Century Park West



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔↔	↑↑↑	↑↑↑	↔	↔↔	↔↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.91	1.00	0.97	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3072	4550	4550	1417	3072	2493
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3072	4550	4550	1417	3072	2493
Volume (vph)	1168	3038	2091	207	53	107
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1204	3132	2156	213	55	110
RTOR Reduction (vph)	0	0	0	112	0	0
Lane Group Flow (vph)	1204	3132	2156	101	55	110
Turn Type	Prot			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)	15.0	55.1	36.1	36.1	25.0	25.0
Effective Green, g (s)	15.0	56.3	37.3	37.3	25.7	25.7
Actuated g/C Ratio	0.17	0.63	0.41	0.41	0.29	0.29
Clearance Time (s)	4.0	5.2	5.2	5.2	4.7	4.7
Vehicle Extension (s)	3.0	4.8	4.6	4.6	3.0	3.0
Lane Grp Cap (vph)	512	2846	1886	587	877	712
v/s Ratio Prot	c0.39	c0.69	0.47		0.02	
v/s Ratio Perm				0.07		c0.04
v/c Ratio	2.35	1.10	1.14	0.17	0.06	0.15
Uniform Delay, d1	37.5	16.9	26.4	16.6	23.4	24.0
Progression Factor	1.56	0.78	1.00	1.00	0.92	0.93
Incremental Delay, d2	608.8	45.8	71.3	0.6	0.0	0.1
Delay (s)	667.2	59.0	97.7	17.3	21.5	22.5
Level of Service	F	E	F	B	C	C
Approach Delay (s)		227.9	90.4		22.2	
Approach LOS		F	F		C	

Intersection Summary

HCM Average Control Delay	175.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4550	1417	1583	4527		1583	3108		1583	3088	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.13	1.00		0.15	1.00	
Satd. Flow (perm)	1583	4550	1417	1583	4527		215	3108		247	3088	
Volume (vph)	139	2242	406	118	2696	94	167	977	137	118	989	196
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	140	2265	410	119	2723	95	169	987	138	119	999	198
RTOR Reduction (vph)	0	0	157	0	3	0	0	9	0	0	14	0
Lane Group Flow (vph)	140	2265	253	119	2815	0	169	1116	0	119	1183	0
Turn Type	Prot		Perm	Prot		pm+pt				Perm		
Protected Phases	1	6		5	2		3	8				4
Permitted Phases			6				8			4		
Actuated Green, G (s)	13.4	53.7	53.7	12.3	52.6		40.0	40.0		26.0	26.0	
Effective Green, g (s)	13.4	54.7	54.7	12.3	53.6		41.0	41.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.46	0.46	0.10	0.45		0.34	0.34		0.22	0.22	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		3.5	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	177	2074	646	162	2022		187	1062		56	695	
v/s Ratio Prot	c0.09	0.50		0.08	c0.62		0.08	c0.36			0.38	
v/s Ratio Perm			0.18				0.23			c0.48		
v/c Ratio	0.79	1.09	0.39	0.73	1.39		0.90	1.05		2.12	1.70	
Uniform Delay, d1	51.9	32.6	21.6	52.3	33.2		56.4	39.5		46.5	46.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.48	1.41		1.00	1.00	
Incremental Delay, d2	19.7	50.0	1.8	13.8	179.6		6.0	25.6		561.0	322.2	
Delay (s)	71.7	82.6	23.4	66.0	212.8		89.6	81.2		607.5	368.7	
Level of Service	E	F	C	E	F		F	F		F	F	
Approach Delay (s)		73.5			206.9			82.3			390.3	
Approach LOS		E			F			F			F	

Intersection Summary

HCM Average Control Delay	171.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.49		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	130.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕↕↕	↖	↖↗	↕↕↕	↖	↖↗	↕↕	↖	↖↗	↕↕	↖
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3212	1000	2168	3212	1000	2168	2235	1000	2168	2235	1000
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2168	3212	1000	2168	3212	1000	2168	2235	1000	2168	2235	1000
Volume (vph)	73	2398	189	48	2048	248	107	1020	200	705	1268	98
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	74	2447	193	49	2090	253	109	1041	204	719	1294	100
RTOR Reduction (vph)	0	0	70	0	0	34	0	0	118	0	0	47
Lane Group Flow (vph)	74	2447	123	49	2090	219	109	1041	86	719	1294	53
Turn Type	Prot		Perm	Prot		pm+ov	Prot		Perm	Prot		Perm
Protected Phases	1	6		5	2	7	3	8		7		4
Permitted Phases			6			2			8			4
Actuated Green, G (s)	6.2	29.7	29.7	8.8	32.3	54.3	9.9	39.6	39.6	22.0	51.7	51.7
Effective Green, g (s)	6.2	31.2	31.2	8.8	33.8	55.8	9.9	42.0	42.0	22.0	54.1	54.1
Actuated g/C Ratio	0.05	0.26	0.26	0.07	0.28	0.46	0.08	0.35	0.35	0.18	0.45	0.45
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5	4.0	4.0	6.4	6.4	4.0	6.4	6.4
Vehicle Extension (s)	2.0	4.5	4.5	2.0	5.2	2.0	2.0	4.7	4.7	2.0	4.7	4.7
Lane Grp Cap (vph)	112	835	260	159	905	465	179	782	350	397	1008	451
v/s Ratio Prot	0.03	c0.76		0.02	c0.65	0.09	0.05	c0.47		c0.33	0.58	
v/s Ratio Perm			0.12			0.13			0.09			0.05
v/c Ratio	0.66	2.93	0.47	0.31	2.31	0.47	0.61	1.33	0.24	1.81	1.28	0.12
Uniform Delay, d1	55.9	44.4	37.5	52.7	43.1	22.0	53.2	39.0	27.7	49.0	33.0	19.1
Progression Factor	1.21	1.61	2.48	0.89	0.91	0.64	1.00	1.00	1.00	0.77	0.66	0.14
Incremental Delay, d2	1.0	869.0	0.6	0.2	590.7	0.1	4.0	157.8	0.7	368.4	130.4	0.1
Delay (s)	68.8	940.3	93.6	47.2	629.9	14.1	57.2	196.8	28.4	406.3	152.1	2.8
Level of Service	E	F	F	D	F	B	E	F	C	F	F	A
Approach Delay (s)		856.3			552.8			160.2			231.5	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	507.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.97		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	159.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.86		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	5704		1583	3167	1417	1583	3167	1417
Flt Permitted	0.12	1.00	1.00	0.12	1.00		0.25	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	198	4550	1417	202	5704		412	3167	1417	215	3167	1417
Volume (vph)	289	3398	81	44	2409	86	77	929	253	282	938	322
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	292	3432	82	44	2433	87	78	938	256	285	947	325
RTOR Reduction (vph)	0	0	28	0	6	0	0	0	6	0	0	0
Lane Group Flow (vph)	292	3432	54	44	2514	0	78	938	250	285	947	325
Turn Type	pm+pt		Perm	pm+pt		Perm		pm+ov	pm+pt		pm+ov	
Protected Phases	1	6		5	2			8	5	7	4	1
Permitted Phases	6		6	2		8	8	8	4			4
Actuated Green, G (s)	40.2	33.2	33.2	38.8	32.5	25.5	25.5	31.8	36.5	36.5	43.5	
Effective Green, g (s)	40.7	33.7	33.7	39.3	33.0	27.0	27.0	33.3	38.0	38.0	45.0	
Actuated g/C Ratio	0.45	0.37	0.37	0.44	0.37	0.30	0.30	0.37	0.42	0.42	0.50	
Clearance Time (s)	4.0	4.5	4.5	4.0	4.5	5.5	5.5	4.0	4.0	5.5	4.0	
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	5.0	3.0	3.0	5.0	3.0	
Lane Grp Cap (vph)	197	1704	531	185	2091	124	950	587	197	1337	771	
v/s Ratio Prot	c0.12	c0.75		0.02	0.44		0.30	0.03	c0.11	0.30	0.03	
v/s Ratio Perm	0.55		0.04	0.09		0.19		0.15	c0.50		0.20	
v/c Ratio	1.48	2.01	0.10	0.24	1.20	0.63	0.99	0.43	1.45	0.71	0.42	
Uniform Delay, d1	43.7	28.1	18.3	20.7	28.5	27.2	31.3	21.2	22.1	21.4	14.3	
Progression Factor	1.51	0.69	0.19	0.56	0.32	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	219.5	456.5	0.0	0.2	92.5	13.3	26.0	0.5	227.2	2.2	0.4	
Delay (s)	285.3	475.9	3.6	11.7	101.8	40.5	57.4	21.7	249.3	23.6	14.6	
Level of Service	F	F	A	B	F	D	E	C	F	C	B	
Approach Delay (s)		451.1			100.3		49.1			63.0		
Approach LOS		F			F		D			E		

Intersection Summary

HCM Average Control Delay	232.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	137.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↖		↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1583	3071		1583	3158		1504	1579	1417		1643	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (perm)	1583	3071		1583	3158		1504	1579	1417		1643	
Volume (vph)	22	987	249	673	1312	24	200	186	128	35	171	10
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	1097	277	748	1458	27	222	207	142	39	190	11
RTOR Reduction (vph)	0	18	0	0	1	0	0	0	87	0	0	0
Lane Group Flow (vph)	24	1356	0	748	1484	0	209	220	55	0	240	0
Turn Type	Prot		Prot		Split		pm+ov		Split			
Protected Phases	1	6		5	2		3	3	5		4	4
Permitted Phases									3			
Actuated Green, G (s)	3.6	36.1		36.2	68.7		10.0	10.0	46.2		20.0	
Effective Green, g (s)	2.6	36.9		35.2	69.5		10.9	10.9	46.1		21.0	
Actuated g/C Ratio	0.02	0.31		0.29	0.58		0.09	0.09	0.38		0.18	
Clearance Time (s)	3.0	4.8		3.0	4.8		4.9	4.9	3.0		5.0	
Vehicle Extension (s)	3.0	6.0		3.0	6.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	34	944		464	1829		137	143	592		288	
v/s Ratio Prot	0.02	c0.44		c0.47	0.47		0.14	c0.14	0.03		c0.15	
v/s Ratio Perm									0.01			
v/c Ratio	0.71	1.44		1.61	0.81		1.53	1.54	0.09		0.83	
Uniform Delay, d1	58.3	41.5		42.4	20.0		54.5	54.5	23.6		47.8	
Progression Factor	0.81	0.86		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	5.9	197.0		285.3	4.0		269.9	274.1	0.1		18.3	
Delay (s)	53.4	232.9		327.7	24.1		324.5	328.7	23.7		66.1	
Level of Service	D	F		F	C		F	F	C		E	
Approach Delay (s)		229.8			125.8			251.3			66.1	
Approach LOS		F			F			F			E	

Intersection Summary

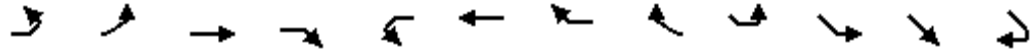
HCM Average Control Delay	171.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	118.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖		↖	↖		↖	↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.90		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1504	1513	1417	1583	1497		1583	1657		1583	1667	1417
Flt Permitted	0.72	0.70	1.00	0.95	1.00		0.21	1.00		0.25	1.00	1.00
Satd. Flow (perm)	1138	1105	1417	1583	1497		348	1657		418	1667	1417
Volume (vph)	263	10	36	17	19	39	80	539	21	52	607	305
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	268	10	37	17	19	40	82	550	21	53	619	311
RTOR Reduction (vph)	0	0	32	0	30	0	0	2	0	0	0	170
Lane Group Flow (vph)	134	144	5	17	29	0	82	569	0	53	619	141
Turn Type	Perm		Perm	Split			Perm			Perm		Perm
Protected Phases		4		3	3			2			2	
Permitted Phases	4		4				2			2		2
Actuated Green, G (s)	10.0	10.0	10.0	17.0	17.0		32.6	32.6		32.6	32.6	32.6
Effective Green, g (s)	11.0	11.0	11.0	18.0	18.0		34.0	34.0		34.0	34.0	34.0
Actuated g/C Ratio	0.15	0.15	0.15	0.24	0.24		0.45	0.45		0.45	0.45	0.45
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.4	5.4		5.4	5.4	5.4
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	167	162	208	380	359		158	751		189	756	642
v/s Ratio Prot				0.01	c0.02			0.34			c0.37	
v/s Ratio Perm	0.12	c0.13	0.00				0.24			0.13		0.10
v/c Ratio	0.80	0.89	0.03	0.04	0.08		0.52	0.76		0.28	0.82	0.22
Uniform Delay, d1	30.9	31.4	27.4	21.9	22.1		14.7	17.1		12.8	17.8	12.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	23.5	39.9	0.1	0.2	0.4		11.7	7.1		3.7	9.6	0.8
Delay (s)	54.5	71.3	27.5	22.1	22.5		26.3	24.1		16.5	27.4	13.2
Level of Service	D	E	C	C	C		C	C		B	C	B
Approach Delay (s)		59.0			22.4			24.4			22.4	
Approach LOS		E			C			C			C	

Intersection Summary

HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	SEL2	SEL	SET	SER
Lane Configurations			↕	↕		↕↕				↕	↕↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1700	1700	1700	1700	1700
Total Lost time (s)			4.0	4.0		4.0				4.0	4.0	
Lane Util. Factor			1.00	1.00		0.95				1.00	0.95	
Frt			1.00	0.85		0.99				1.00	0.99	
Flt Protected			0.99	1.00		0.98				0.95	1.00	
Satd. Flow (prot)			1163	1000		2170				1583	3131	
Flt Permitted			0.73	1.00		0.67				0.44	1.00	
Satd. Flow (perm)			854	1000		1486				726	3131	
Volume (vph)	19	64	264	55	251	414	41	20	4	34	284	23
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	20	66	272	57	259	427	42	21	4	35	293	24
RTOR Reduction (vph)	0	0	0	28	0	2	0	0	0	0	8	0
Lane Group Flow (vph)	0	0	358	29	0	747	0	0	0	39	309	0
Turn Type		Perm		Perm	Perm				Perm	Perm		
Protected Phases			6			2					4	
Permitted Phases		6		6	2				4	4		
Actuated Green, G (s)			36.0	36.0		36.0				28.0	28.0	
Effective Green, g (s)			38.0	38.0		38.0				29.0	29.0	
Actuated g/C Ratio			0.51	0.51		0.51				0.39	0.39	
Clearance Time (s)			6.0	6.0		6.0				5.0	5.0	
Vehicle Extension (s)			3.0	3.0		3.0				3.0	3.0	
Lane Grp Cap (vph)			433	507		753				281	1211	
v/s Ratio Prot											0.10	
v/s Ratio Perm			0.42	0.03		0.50				0.05		
v/c Ratio			0.83	0.06		0.99				0.14	0.26	
Uniform Delay, d1			15.7	9.4		18.3				14.9	15.7	
Progression Factor			1.06	1.60		1.00				1.00	1.00	
Incremental Delay, d2			12.9	0.2		30.8				1.0	0.5	
Delay (s)			29.6	15.2		49.1				15.9	16.2	
Level of Service			C	B		D				B	B	
Approach Delay (s)			27.7			49.1					16.1	
Approach LOS			C			D					B	
Intersection Summary												
HCM Average Control Delay			31.1			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			75.0			Sum of lost time (s)				8.0		
Intersection Capacity Utilization			121.7%			ICU Level of Service				H		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	NWL	NWT	NWR	NWR2
Lane Configurations				
Ideal Flow (vphpl)	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	
Satd. Flow (prot)	1583	1667	1417	
Flt Permitted	0.55	1.00	1.00	
Satd. Flow (perm)	910	1667	1417	
Volume (vph)	142	323	185	365
Peak-hour factor, PHF	0.97	0.97	0.97	0.97
Adj. Flow (vph)	146	333	191	376
RTOR Reduction (vph)	0	0	94	0
Lane Group Flow (vph)	146	333	473	0
Turn Type	Perm		Perm	
Protected Phases		8		
Permitted Phases	8		8	
Actuated Green, G (s)	28.0	28.0	28.0	
Effective Green, g (s)	29.0	29.0	29.0	
Actuated g/C Ratio	0.39	0.39	0.39	
Clearance Time (s)	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	
Lane Grp Cap (vph)	352	645	548	
v/s Ratio Prot		0.20		
v/s Ratio Perm	0.16		0.33	
v/c Ratio	0.41	0.52	0.86	
Uniform Delay, d1	16.8	17.6	21.2	
Progression Factor	1.08	1.09	1.31	
Incremental Delay, d2	0.3	0.3	1.8	
Delay (s)	18.5	19.4	29.5	
Level of Service	B	B	C	
Approach Delay (s)		24.8		
Approach LOS		C		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		1.00	0.86			1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.98			0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	1.00
Satd. Flow (prot)	2168	3968		1118	3956			1152		1118	1176	1000
Flt Permitted	0.95	1.00		0.05	1.00			0.99		0.25	1.00	1.00
Satd. Flow (perm)	2168	3968		53	3956			1141		290	1176	1000
Volume (vph)	211	2341	349	96	2579	453	9	311	54	51	316	207
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	213	2365	353	97	2605	458	9	314	55	52	319	209
RTOR Reduction (vph)	0	18	0	0	21	0	0	4	0	0	0	1
Lane Group Flow (vph)	213	2700	0	97	3042	0	0	374	0	52	319	208
Turn Type	Prot		Perm			Perm			Perm		pm+ov	
Protected Phases	5	2			6			4			4	5
Permitted Phases				6			4			4		4
Actuated Green, G (s)	11.0	103.0		88.0	88.0			38.0		38.0	38.0	49.0
Effective Green, g (s)	11.0	103.0		88.0	88.0			39.0		39.0	39.0	50.0
Actuated g/C Ratio	0.07	0.69		0.59	0.59			0.26		0.26	0.26	0.33
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0		5.0	5.0	4.0
Vehicle Extension (s)	1.5	4.0		4.0	4.0			3.0		3.0	3.0	1.5
Lane Grp Cap (vph)	159	2725		31	2321			297		75	306	360
v/s Ratio Prot	c0.10	0.68			0.77						0.27	0.04
v/s Ratio Perm				c1.81				c0.33		0.18		0.17
v/c Ratio	1.34	0.99		3.13	1.31			1.26		0.69	1.04	0.58
Uniform Delay, d1	69.5	23.0		31.0	31.0			55.5		50.1	55.5	41.3
Progression Factor	1.05	1.43		1.00	1.00			1.00		1.04	1.05	1.05
Incremental Delay, d2	156.7	3.5		1036.9	143.0			140.4		20.7	58.6	1.2
Delay (s)	229.6	36.4		1067.9	174.0			195.9		72.9	116.7	44.6
Level of Service	F	D		F	F			F		E	F	D
Approach Delay (s)		50.4			201.4			195.9			86.8	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	128.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.45		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	140.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕	↗	↖	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00	0.57	1.00	1.00	0.88
Flpb, ped/bikes	0.96	1.00		0.99	1.00		0.94	1.00	1.00	0.75	1.00	1.00
Frt	1.00	0.94		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	1530		1572	1650		1490	3167	801	1187	3167	1248
Flt Permitted	0.62	1.00		0.41	1.00		0.47	1.00	1.00	0.43	1.00	1.00
Satd. Flow (perm)	989	1530		683	1650		743	3167	801	538	3167	1248
Volume (vph)	99	172	124	185	210	10	43	450	147	40	394	59
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	101	176	127	189	214	10	44	459	150	41	402	60
RTOR Reduction (vph)	0	34	0	0	2	0	0	0	82	0	0	38
Lane Group Flow (vph)	101	269	0	189	222	0	44	459	68	41	402	22
Conf. Peds. (#/hr)	66		43	43		66	111		339	339		111
Conf. Bikes (#/hr)			4			6			18			1
Turn Type	Perm			pm+pt			Perm		pm+ov	Perm		Perm
Protected Phases		6		5	2			8	5		4	
Permitted Phases	6			2			8	8	4			4
Actuated Green, G (s)	27.6	27.6		37.6	37.6		27.0	27.0	33.5	27.0	27.0	27.0
Effective Green, g (s)	29.0	29.0		39.0	39.0		28.0	28.0	34.0	28.0	28.0	28.0
Actuated g/C Ratio	0.39	0.39		0.52	0.52		0.37	0.37	0.45	0.37	0.37	0.37
Clearance Time (s)	5.4	5.4		3.5	5.4		5.0	5.0	3.5	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	382	592		426	858		277	1182	406	201	1182	466
v/s Ratio Prot		0.18		c0.04	0.13			c0.14	0.01		0.13	
v/s Ratio Perm	0.10			c0.19			0.06		0.07	0.08		0.02
v/c Ratio	0.26	0.45		0.44	0.26		0.16	0.39	0.17	0.20	0.34	0.05
Uniform Delay, d1	15.7	17.1		10.5	10.0		15.7	17.2	12.1	15.9	16.9	15.0
Progression Factor	1.02	1.02		1.00	1.00		1.81	1.84	4.65	1.00	1.00	1.00
Incremental Delay, d2	1.7	2.5		0.7	0.7		1.1	0.9	0.2	2.3	0.8	0.2
Delay (s)	17.6	19.9		11.3	10.7		29.4	32.5	56.6	18.2	17.7	15.2
Level of Service	B	B		B	B		C	C	E	B	B	B
Approach Delay (s)		19.3			11.0			37.8			17.4	
Approach LOS		B			B			D			B	

Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↕			↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	1.00
Frbp, ped/bikes		1.00	1.00		0.96		1.00	0.95			1.00	0.30
Flpb, ped/bikes		0.93	1.00		0.92		0.79	1.00			0.95	1.00
Frt		1.00	0.85		0.98		1.00	0.99			1.00	0.85
Flt Protected		0.99	1.00		0.99		0.95	1.00			0.99	1.00
Satd. Flow (prot)		1525	1417		1441		1258	2962			2956	420
Flt Permitted		0.87	1.00		0.93		0.30	1.00			0.61	1.00
Satd. Flow (perm)		1345	1417		1350		391	2962			1821	420
Volume (vph)	58	137	30	31	125	20	98	604	50	173	516	76
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	62	147	32	33	134	22	105	649	54	186	555	82
RTOR Reduction (vph)	0	0	32	0	1	0	0	3	0	0	0	8
Lane Group Flow (vph)	0	209	0	0	188	0	105	700	0	0	741	74
Confl. Peds. (#/hr)	570		715	715		570	814		795	795		814
Confl. Bikes (#/hr)			9			12			43			28
Turn Type	Perm		NA	Perm			Perm			Perm		Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		2
Actuated Green, G (s)		30.5	0.0		30.5		34.1	34.1			34.1	34.1
Effective Green, g (s)		32.0	0.0		32.0		35.0	35.0			35.0	35.0
Actuated g/C Ratio		0.43	0.00		0.43		0.47	0.47			0.47	0.47
Clearance Time (s)		5.5			5.5		4.9	4.9			4.9	4.9
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		574	0		576		182	1382			850	196
v/s Ratio Prot								0.24				
v/s Ratio Perm		c0.16			0.14		0.27				c0.41	0.18
v/c Ratio		0.36	0.00		0.33		0.58	0.51			0.97dl	0.38
Uniform Delay, d1		14.6	37.5		14.3		14.6	14.0			18.0	12.9
Progression Factor		1.00	1.00		1.00		1.00	1.00			0.96	0.96
Incremental Delay, d2		1.8	0.0		1.5		12.6	1.3			11.5	5.2
Delay (s)		16.4	37.5		15.8		27.2	15.3			28.7	17.6
Level of Service		B	D		B		C	B			C	B
Approach Delay (s)		19.2			15.8			16.9			27.6	
Approach LOS		B			B			B			C	

Intersection Summary

HCM Average Control Delay	21.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	92.9%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕	↗		↕↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor		0.95			0.95			0.95	1.00		0.95	
Frbp, ped/bikes		0.85			0.98			1.00	0.67		0.98	
Flpb, ped/bikes		0.99			0.93			1.00	1.00		1.00	
Frt		0.93			0.99			1.00	0.85		0.99	
Flt Protected		1.00			0.98			1.00	1.00		1.00	
Satd. Flow (prot)		1748			1963			2235	668		2186	
Flt Permitted		0.89			0.61			1.00	1.00		0.93	
Satd. Flow (perm)		1567			1235			2235	668		2041	
Volume (vph)	24	195	202	297	267	33	0	929	290	9	452	20
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	24	199	206	303	272	34	0	948	296	9	461	20
RTOR Reduction (vph)	0	19	0	0	3	0	0	0	109	0	2	0
Lane Group Flow (vph)	0	410	0	0	606	0	0	948	187	0	488	0
Conf. Peds. (#/hr)	138		216	216		138	330		211	211		330
Conf. Bikes (#/hr)			2			2			16			3
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		
Actuated Green, G (s)		72.5			72.5			67.0	67.0			67.0
Effective Green, g (s)		74.0			74.0			68.0	68.0			68.0
Actuated g/C Ratio		0.49			0.49			0.45	0.45			0.45
Clearance Time (s)		5.5			5.5			5.0	5.0			5.0
Vehicle Extension (s)		3.0			3.0			3.0	3.0			3.0
Lane Grp Cap (vph)		773			609			1013	303			925
v/s Ratio Prot								c0.42				
v/s Ratio Perm		0.26			c0.49				0.28			0.24
v/c Ratio		0.53			1.33dl			0.94	0.62			0.53
Uniform Delay, d1		26.1			37.8			38.9	31.1			29.5
Progression Factor		0.75			1.24			1.52	2.76			1.00
Incremental Delay, d2		0.2			26.3			2.2	0.9			2.1
Delay (s)		19.8			73.2			61.4	86.6			31.6
Level of Service		B			E			E	F			C
Approach Delay (s)		19.8			73.2			67.4				31.6
Approach LOS		B			E			E				C

Intersection Summary

HCM Average Control Delay	55.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	103.1%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		0.97	0.86		1.00	0.91		1.00	0.86	0.86
Frbp, ped/bikes	1.00	0.94		1.00	0.98		1.00	0.92		1.00	1.00	0.85
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		0.92	1.00	1.00
Frt	1.00	0.97		1.00	0.99		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	2168	3713		2168	3958		1102	2861		1027	3035	727
Flt Permitted	0.95	1.00		0.95	1.00		0.20	1.00		0.25	1.00	1.00
Satd. Flow (perm)	2168	3713		2168	3958		232	2861		275	3035	727
Volume (vph)	412	2722	628	195	2482	123	422	656	203	57	590	289
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	434	2865	661	205	2613	129	444	691	214	60	621	304
RTOR Reduction (vph)	0	28	0	0	4	0	0	37	0	0	0	1
Lane Group Flow (vph)	434	3498	0	205	2738	0	444	868	0	60	621	303
Confl. Peds. (#/hr)	224		162	162		224	210		243	243		210
Confl. Bikes (#/hr)			3			2			13			5
Turn Type	Prot			Prot			pm+pt			Perm		pm+ov
Protected Phases	5	2		1	6		3	8			4	4
Permitted Phases							8			4		4
Actuated Green, G (s)	32.7	76.5		13.0	56.8		45.1	45.1		31.1	31.1	63.8
Effective Green, g (s)	32.7	78.0		13.0	58.3		47.0	47.0		33.0	33.0	65.7
Actuated g/C Ratio	0.22	0.52		0.09	0.39		0.31	0.31		0.22	0.22	0.44
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	5.9		5.9	5.9	4.0
Vehicle Extension (s)	2.0	4.0		2.0	4.0		3.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	473	1931		188	1538		131	896		61	668	338
v/s Ratio Prot	0.20	c0.94		0.09	c0.69		c0.23	0.30			0.20	0.20
v/s Ratio Perm							c0.84			0.22		0.22
v/c Ratio	0.92	1.81		1.09	1.78		3.39	0.97		0.98	0.93	0.90
Uniform Delay, d1	57.3	36.0		68.5	45.9		47.3	50.8		58.2	57.4	39.0
Progression Factor	1.35	1.10		1.07	1.10		1.00	1.00		1.04	1.03	1.10
Incremental Delay, d2	3.0	365.4		49.3	351.3		1094.3	22.3		92.8	15.2	19.5
Delay (s)	80.2	405.1		122.4	401.8		1141.7	73.1		153.1	74.3	62.2
Level of Service	F	F		F	F		F	E		F	E	E
Approach Delay (s)		369.5			382.4			424.8			75.4	
Approach LOS		F			F			F			E	

Intersection Summary

HCM Average Control Delay	350.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.29		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	165.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.97			0.94		1.00	0.95		1.00	1.00	
Flt Protected		0.97			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1104			1077		1118	2128		1118	2227	
Flt Permitted		0.62			0.77		0.20	1.00		0.15	1.00	
Satd. Flow (perm)		707			852		237	2128		181	2227	
Volume (vph)	139	23	48	180	28	188	42	1246	583	367	888	21
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	143	24	49	186	29	194	43	1285	601	378	915	22
RTOR Reduction (vph)	0	18	0	0	11	0	0	92	0	0	3	0
Lane Group Flow (vph)	0	198	0	0	398	0	43	1794	0	378	934	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		25.0			25.0		25.6	25.6		25.6	25.6	
Effective Green, g (s)		26.0			26.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio		0.43			0.43		0.43	0.43		0.43	0.43	
Clearance Time (s)		5.0			5.0		4.4	4.4		4.4	4.4	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		306			369		103	922		78	965	
v/s Ratio Prot								0.84			0.42	
v/s Ratio Perm		0.28			c0.47		0.18			c2.09		
v/c Ratio		0.65			1.08		0.42	1.95		4.85	0.97	
Uniform Delay, d1		13.4			17.0		11.8	17.0		17.0	16.6	
Progression Factor		1.00			1.00		0.26	0.18		1.00	1.00	
Incremental Delay, d2		4.7			69.7		1.1	426.1		1759.4	22.2	
Delay (s)		18.1			86.7		4.2	429.2		1776.4	38.8	
Level of Service		B			F		A	F		F	D	
Approach Delay (s)		18.1			86.7			419.7			538.3	
Approach LOS		B			F			F			F	

Intersection Summary

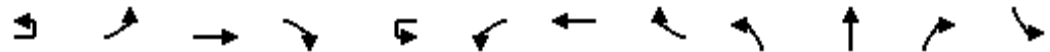
HCM Average Control Delay	402.4	HCM Level of Service	F
HCM Volume to Capacity ratio	2.95		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	164.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	1123		1118	1164		1118	2222		1118	2206	
Flt Permitted	0.36	1.00		0.33	1.00		0.15	1.00		0.15	1.00	
Satd. Flow (perm)	428	1123		390	1164		179	2222		174	2206	
Volume (vph)	185	312	136	61	389	29	103	1574	66	22	951	92
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	193	325	142	64	405	30	107	1640	69	23	991	96
RTOR Reduction (vph)	0	26	0	0	4	0	0	5	0	0	12	0
Lane Group Flow (vph)	193	441	0	64	431	0	107	1704	0	23	1075	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		4		4		2		2		2	
Permitted Phases	4		4		2		2		2		2	
Actuated Green, G (s)	23.4	23.4		23.4	23.4		26.5	26.5		26.5	26.5	
Effective Green, g (s)	25.0	25.0		25.0	25.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.45	0.45		0.45	0.45	
Clearance Time (s)	5.6	5.6		5.6	5.6		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	178	468		163	485		81	1000		78	993	
v/s Ratio Prot		0.39			0.37			c0.77			0.49	
v/s Ratio Perm	c0.45			0.16			0.60			0.13		
v/c Ratio	1.08	0.94		0.39	0.89		1.32	1.70		0.29	1.08	
Uniform Delay, d1	17.5	16.8		12.2	16.2		16.5	16.5		10.5	16.5	
Progression Factor	0.61	0.56		1.00	1.00		2.31	2.42		0.47	0.58	
Incremental Delay, d2	47.3	4.3		1.6	17.7		162.8	317.8		2.7	42.8	
Delay (s)	57.9	13.7		13.8	33.9		200.9	357.7		7.6	52.3	
Level of Service	E	B		B	C		F	F		A	D	
Approach Delay (s)		26.6			31.3			348.5			51.4	
Approach LOS		C			C			F			D	

Intersection Summary

HCM Average Control Delay	177.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	145.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔↔	↔↔↔	↔		↔↔	↔↔↔	↔	↔	↔↔		↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		0.97	0.91	1.00		0.97	0.91	1.00	1.00	0.95		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		3072	4550	1417		3072	4550	1417	1583	3155		1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.15	1.00		0.09
Satd. Flow (perm)		3072	4550	1417		3072	4550	1417	248	3155		144
Volume (vph)	2	121	2577	85	49	155	2142	330	138	1315	34	209
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	2	125	2657	88	51	160	2208	340	142	1356	35	215
RTOR Reduction (vph)	0	0	0	30	0	0	0	82	0	1	0	0
Lane Group Flow (vph)	0	127	2657	58	0	211	2208	258	142	1390	0	215
Turn Type	Prot	Prot	pm+ov		Prot	Prot	pm+ov	pm+pt				pm+pt
Protected Phases	1	1	6	3	5	5	2	7	3	8		7
Permitted Phases				6				2	8			4
Actuated Green, G (s)		10.2	32.0	42.6		13.5	35.3	47.3	52.9	42.3		55.7
Effective Green, g (s)		10.2	33.5	44.1		13.5	36.8	48.8	55.6	45.0		58.4
Actuated g/C Ratio		0.08	0.28	0.37		0.11	0.31	0.41	0.46	0.38		0.49
Clearance Time (s)		4.0	5.5	4.0		4.0	5.5	4.0	4.0	6.7		4.0
Vehicle Extension (s)		3.0	5.0	3.0		3.0	5.0	3.0	3.0	4.0		3.0
Lane Grp Cap (vph)		261	1270	568		346	1395	623	233	1183		214
v/s Ratio Prot		0.04	c0.58	0.01		c0.07	c0.49	0.04	0.05	c0.44		c0.10
v/s Ratio Perm				0.03				0.14	0.23			0.39
v/c Ratio		0.49	2.09	0.10		0.61	1.58	0.41	0.61	1.17		1.00
Uniform Delay, d1		52.4	43.2	24.9		50.7	41.6	25.4	22.0	37.5		56.2
Progression Factor		0.59	1.30	2.60		0.45	0.89	1.51	1.00	1.00		1.18
Incremental Delay, d2		0.1	491.7	0.0		0.3	262.6	0.0	4.5	87.8		32.8
Delay (s)		30.9	547.9	65.0		23.3	299.5	38.4	26.5	125.3		99.0
Level of Service		C	F	E		C	F	D	C	F		F
Approach Delay (s)			510.3				246.2			116.2		
Approach LOS			F				F			F		

Intersection Summary

HCM Average Control Delay	281.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	130.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Ideal Flow (vphpl)	1700	1700
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3167	1417
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3167	1417
Volume (vph)	920	91
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	948	94
RTOR Reduction (vph)	0	58
Lane Group Flow (vph)	948	36
Turn Type		Perm
Protected Phases	4	
Permitted Phases		4
Actuated Green, G (s)	43.7	43.7
Effective Green, g (s)	46.4	46.4
Actuated g/C Ratio	0.39	0.39
Clearance Time (s)	6.7	6.7
Vehicle Extension (s)	4.0	4.0
Lane Grp Cap (vph)	1225	548
v/s Ratio Prot	0.30	
v/s Ratio Perm		0.03
v/c Ratio	0.77	0.07
Uniform Delay, d1	32.2	23.2
Progression Factor	0.86	1.34
Incremental Delay, d2	0.9	0.0
Delay (s)	28.5	31.1
Level of Service	C	C
Approach Delay (s)	40.7	
Approach LOS	D	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑↑↑		↔	↑↑↑		↔	↑↑		↔	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.86		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4536		1583	5680		1583	3104		1583	3143	
Flt Permitted	0.13	1.00		0.11	1.00		0.20	1.00		0.13	1.00	
Satd. Flow (perm)	212	4536		188	5680		327	3104		215	3143	
Volume (vph)	60	2613	55	98	2384	157	49	1169	177	135	970	51
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	64	2780	59	104	2536	167	52	1244	188	144	1032	54
RTOR Reduction (vph)	0	3	0	0	11	0	0	13	0	0	0	0
Lane Group Flow (vph)	64	2836	0	104	2692	0	52	1419	0	144	1086	0
Turn Type	Perm		pm+pt		Perm		pm+pt		Perm		pm+pt	
Protected Phases	2		1		6		8		7		4	
Permitted Phases	2		6		8		4		8		4	
Actuated Green, G (s)	30.4	30.4		41.4	41.4		25.6	25.6		38.2	38.2	
Effective Green, g (s)	31.4	31.4		42.4	42.4		27.0	27.0		39.6	39.6	
Actuated g/C Ratio	0.35	0.35		0.47	0.47		0.30	0.30		0.44	0.44	
Clearance Time (s)	5.0	5.0		3.5	5.0		5.4	5.4		3.5	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	1583		197	2676		98	931		225	1383	
v/s Ratio Prot	c0.63		0.04		c0.47		c0.46		0.06		c0.35	
v/s Ratio Perm	0.30		0.21		0.16		0.22		0.16		0.22	
v/c Ratio	0.86	1.79		0.53	1.01		0.53	1.52		0.64	0.79	
Uniform Delay, d1	27.3	29.3		41.0	23.8		26.2	31.5		20.9	21.6	
Progression Factor	0.63	0.68		2.17	1.77		0.82	0.84		1.00	1.00	
Incremental Delay, d2	11.7	356.5		0.2	6.8		10.4	238.7		6.1	4.5	
Delay (s)	28.8	376.4		89.2	49.0		32.0	265.1		26.9	26.1	
Level of Service	C		F		D		C		F		C	
Approach Delay (s)	368.8		50.5		257.0		26.2		26.2		26.2	
Approach LOS	F		D		F		C		F		C	

Intersection Summary

HCM Average Control Delay	193.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	128.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.99
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	4550	1417	1583	3167	1417	1583	3135	3135
Flt Permitted	0.14	1.00	1.00	0.14	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	231	4550	1417	233	4550	1417	1583	3167	1417	1583	3135	3135
Volume (vph)	230	1996	97	79	1789	249	176	966	111	305	797	57
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	235	2037	99	81	1826	254	180	986	113	311	813	58
RTOR Reduction (vph)	0	0	58	0	0	24	0	0	0	0	6	0
Lane Group Flow (vph)	235	2037	41	81	1826	230	180	986	113	311	865	0
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	Prot		pm+ov		Prot	
Protected Phases	1	6	3	5	2	7	3	8	5	7	4	
Permitted Phases	6		6	2		2			8			
Actuated Green, G (s)	33.4	26.9	35.8	33.0	26.7	33.2	8.9	32.2	38.5	6.5	29.8	
Effective Green, g (s)	34.8	28.8	37.2	34.4	28.6	34.6	8.4	33.4	39.2	6.0	31.0	
Actuated g/C Ratio	0.39	0.32	0.41	0.38	0.32	0.38	0.09	0.37	0.44	0.07	0.34	
Clearance Time (s)	3.5	5.9	3.5	3.5	5.9	3.5	3.5	5.2	3.5	3.5	5.2	
Vehicle Extension (s)	3.0	5.0	3.0	3.0	5.0	3.0	3.0	5.0	3.0	3.0	5.0	
Lane Grp Cap (vph)	179	1456	586	176	1446	608	148	1175	680	106	1080	
v/s Ratio Prot	c0.09	c0.45	0.01	0.03	0.40	0.03	c0.11	c0.31	0.01	c0.20	0.28	
v/s Ratio Perm	0.42		0.02	0.15		0.14			0.07			
v/c Ratio	1.31	1.40	0.07	0.46	1.26	0.38	1.22	0.84	0.17	2.93	0.80	
Uniform Delay, d1	26.2	30.6	15.9	22.6	30.7	20.0	40.8	25.8	15.5	42.0	26.7	
Progression Factor	1.92	0.31	0.07	1.00	1.00	1.00	1.00	1.00	1.00	1.41	0.91	
Incremental Delay, d2	144.5	180.0	0.0	1.9	124.0	0.4	143.6	6.0	0.1	884.6	2.9	
Delay (s)	194.9	189.4	1.1	24.5	154.7	20.3	184.4	31.9	15.6	943.6	27.1	
Level of Service	F	F	A	C	F	C	F	C	B	F	C	
Approach Delay (s)		182.1			134.0			51.9			268.2	
Approach LOS		F			F			D			F	

Intersection Summary

HCM Average Control Delay	158.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	114.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↕		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.96		1.00	1.00	0.84	1.00	0.96		1.00	1.00	
Flpb, ped/bikes	0.86	1.00		0.90	1.00	1.00	0.94	1.00		0.95	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.95		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1360	1530		1429	1667	1196	1487	2875		1499	3143	
Flt Permitted	0.74	1.00		0.63	1.00	1.00	0.44	1.00		0.49	1.00	
Satd. Flow (perm)	1059	1530		942	1667	1196	695	2875		769	3143	
Volume (vph)	19	103	41	116	25	57	10	272	152	89	483	12
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	20	110	44	123	27	61	11	289	162	95	514	13
RTOR Reduction (vph)	0	19	0	0	0	44	0	63	0	0	2	0
Lane Group Flow (vph)	20	135	0	123	27	17	11	388	0	95	525	0
Conf. Peds. (#/hr)	130		66	66		130	66		85	85		66
Conf. Bikes (#/hr)			1			1			5			14
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4	2			2		
Actuated Green, G (s)	20.2	20.2		20.2	20.2	20.2	45.3	45.3		45.3	45.3	
Effective Green, g (s)	21.0	21.0		21.0	21.0	21.0	46.0	46.0		46.0	46.0	
Actuated g/C Ratio	0.28	0.28		0.28	0.28	0.28	0.61	0.61		0.61	0.61	
Clearance Time (s)	4.8	4.8		4.8	4.8	4.8	4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	297	428		264	467	335	426	1763		472	1928	
v/s Ratio Prot		0.09			0.02			0.14			c0.17	
v/s Ratio Perm	0.02			c0.13		0.01	0.02			0.12		
v/c Ratio	0.07	0.31		0.47	0.06	0.05	0.03	0.22		0.20	0.27	
Uniform Delay, d1	19.8	21.3		22.4	19.8	19.7	5.7	6.5		6.4	6.7	
Progression Factor	1.00	1.00		0.93	1.00	1.11	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	1.9		5.7	0.2	0.3	0.1	0.3		1.0	0.3	
Delay (s)	20.3	23.2		26.5	20.0	22.2	5.8	6.8		7.4	7.1	
Level of Service	C	C		C	C	C	A	A		A	A	
Approach Delay (s)		22.9			24.4			6.7			7.1	
Approach LOS		C			C			A			A	

Intersection Summary

HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↘		↗	↕	↘	↗	↕	↘
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)				4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor				1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes				1.00	0.89		1.00	1.00	0.81	1.00	1.00	
Flpb, ped/bikes				1.00	1.00		0.98	1.00	1.00	0.97	1.00	
Frt				1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected				0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1118	894		1098	2235	807	1084	2233	
Flt Permitted				0.95	1.00		0.45	1.00	1.00	0.21	1.00	
Satd. Flow (perm)				1118	894		521	2235	807	236	2233	
Volume (vph)	0	0	0	126	4	149	3	1048	164	239	494	2
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	130	4	154	3	1080	169	246	509	2
RTOR Reduction (vph)	0	0	0	0	109	0	0	0	68	0	0	0
Lane Group Flow (vph)	0	0	0	130	49	0	3	1080	101	246	511	0
Confl. Peds. (#/hr)	55						55	20		161	161	20
Confl. Bikes (#/hr)							1			14		
Turn Type	Split		Perm			Perm		Perm custom				
Protected Phases	3	3			4			6				
Permitted Phases				4			6		6	2	2	
Actuated Green, G (s)				21.0	21.0		44.4	44.4	44.4	44.4	44.4	
Effective Green, g (s)				22.0	22.0		45.0	45.0	45.0	45.0	45.0	
Actuated g/C Ratio				0.29	0.29		0.60	0.60	0.60	0.60	0.60	
Clearance Time (s)				5.0	5.0		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)				3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)				328	262		313	1341	484	142	1340	
v/s Ratio Prot					0.06			0.48				
v/s Ratio Perm				c0.12			0.01		0.13	c1.04	0.23	
v/c Ratio				0.40	0.19		0.01	0.81	0.21	1.73	0.38	
Uniform Delay, d1				21.2	19.8		6.0	11.6	6.9	15.0	7.8	
Progression Factor				1.40	3.99		0.91	0.84	1.08	1.00	1.00	
Incremental Delay, d2				0.2	0.1		0.0	0.5	0.1	357.2	0.8	
Delay (s)				30.0	79.3		5.5	10.3	7.5	372.2	8.6	
Level of Service				C	E		A	B	A	F	A	
Approach Delay (s)		0.0			57.0			9.9			126.8	
Approach LOS		A			E			A			F	
Intersection Summary												
HCM Average Control Delay			54.3									HCM Level of Service D
HCM Volume to Capacity ratio			1.30									
Actuated Cycle Length (s)			75.0									Sum of lost time (s) 8.0
Intersection Capacity Utilization			95.9%									ICU Level of Service F
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		1.00	0.86		1.00	0.95	1.00	1.00	1.00	0.88
Frbp, ped/bikes	1.00	0.98		1.00	0.95		1.00	1.00	0.67	1.00	1.00	0.84
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.95	1.00	1.00	0.86	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3924		1118	3761		1059	2235	666	960	1176	1485
Flt Permitted	0.95	1.00		0.06	1.00		0.37	1.00	1.00	0.40	1.00	1.00
Satd. Flow (perm)	2168	3924		71	3761		408	2235	666	402	1176	1485
Volume (vph)	323	3707	183	44	2648	472	67	524	72	93	192	299
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	344	3944	195	47	2817	502	71	557	77	99	204	318
RTOR Reduction (vph)	0	5	0	0	20	0	0	0	0	0	0	0
Lane Group Flow (vph)	344	4134	0	47	3299	0	71	557	77	99	204	318
Conf. Peds. (#/hr)	223		168	168		223	186		285	285		186
Conf. Bikes (#/hr)			8			7			18			3
Turn Type	Prot			Perm		pm+pt		Perm	Perm		pm+ov	
Protected Phases	1	6			2	3	8				4	1
Permitted Phases				2		8		8	4			4
Actuated Green, G (s)	26.7	95.9		65.2	65.2	43.3	43.3	43.3	30.2	30.2	56.9	
Effective Green, g (s)	26.7	96.9		66.2	66.2	45.1	45.1	45.1	32.0	32.0	58.7	
Actuated g/C Ratio	0.18	0.65		0.44	0.44	0.30	0.30	0.30	0.21	0.21	0.39	
Clearance Time (s)	4.0	5.0		5.0	5.0	4.0	5.8	5.8	5.8	5.8	4.0	
Vehicle Extension (s)	2.0	4.0		4.0	4.0	2.0	3.0	3.0	3.0	3.0	2.0	
Lane Grp Cap (vph)	386	2535		31	1660	162	672	200	86	251	621	
v/s Ratio Prot	0.16	c1.05			c0.88	0.03	c0.25			0.17	0.09	
v/s Ratio Perm				0.66		0.11		0.12	c0.25		0.12	
v/c Ratio	0.89	1.63		1.52	1.99	0.44	0.83	0.39	1.15	0.81	0.51	
Uniform Delay, d1	60.2	26.5		41.9	41.9	40.2	48.9	41.5	59.0	56.1	34.7	
Progression Factor	0.99	1.07		0.43	0.45	1.00	1.00	1.00	1.02	1.02	1.14	
Incremental Delay, d2	2.6	284.1		246.7	444.5	0.7	8.3	1.2	140.1	16.8	0.3	
Delay (s)	62.5	312.5		264.6	463.3	40.9	57.2	42.7	200.3	74.0	39.9	
Level of Service	E	F		F	F	D	E	D	F	E	D	
Approach Delay (s)		293.3			460.5		54.0			76.7		
Approach LOS		F			F		D			E		

Intersection Summary			
HCM Average Control Delay	321.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.67		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	145.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑		↖		↖		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0			
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00			
Frt		0.99		1.00	1.00		1.00		0.85			
Flt Protected		1.00		0.95	1.00		0.95		1.00			
Satd. Flow (prot)		3126		1583	3167		1583		1417			
Flt Permitted		1.00		0.06	1.00		0.76		1.00			
Satd. Flow (perm)		3126		107	3167		1262		1417			
Volume (vph)	0	2075	192	893	1490	0	69	0	686	0	0	0
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	2139	198	921	1536	0	71	0	707	0	0	0
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	182	0	0	0
Lane Group Flow (vph)	0	2331	0	921	1536	0	71	0	525	0	0	0
Turn Type				pm+pt		custom		Over	Perm			
Protected Phases		2		1	6			1			4	
Permitted Phases				6			8			4		
Actuated Green, G (s)		57.2		100.4	100.4		10.6		39.2			
Effective Green, g (s)		58.2		101.4	101.4		10.6		39.2			
Actuated g/C Ratio		0.49		0.85	0.85		0.09		0.33			
Clearance Time (s)		5.0		4.0	5.0		4.0		4.0			
Vehicle Extension (s)		4.0		3.0	3.0		3.0		3.0			
Lane Grp Cap (vph)		1516		573	2676		111		463			
v/s Ratio Prot		0.75		c0.53	0.49				0.37			
v/s Ratio Perm				c0.83			c0.06					
v/c Ratio		1.54		1.61	0.57		0.64		1.13			
Uniform Delay, d1		30.9		42.6	2.8		52.9		40.4			
Progression Factor		1.00		1.20	0.63		1.00		1.00			
Incremental Delay, d2		245.4		279.7	0.7		11.5		83.5			
Delay (s)		276.3		330.9	2.5		64.4		123.9			
Level of Service		F		F	A		E		F			
Approach Delay (s)		276.3			125.6			118.5			0.0	
Approach LOS		F			F			F			A	

Intersection Summary			
HCM Average Control Delay	187.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.50		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	140.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑		↔↔	↑↑↑		↔	↑↑	↔	↔	↑↑	↔↔
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		0.97	0.86		1.00	0.95	1.00	1.00	0.95	0.88
Frbp, ped/bikes	1.00	0.97		1.00	1.00		1.00	1.00	0.95	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3865		2168	3975		1102	2235	955	1105	2235	1667
Flt Permitted	0.95	1.00		0.95	1.00		0.37	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)	2168	3865		2168	3975		425	2235	955	339	2235	1667
Volume (vph)	928	4179	440	17	2837	300	256	543	132	486	291	331
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1009	4542	478	18	3084	326	278	590	143	528	316	360
RTOR Reduction (vph)	0	12	0	0	12	0	0	0	0	0	0	4
Lane Group Flow (vph)	1009	5008	0	18	3398	0	278	590	143	528	316	356
Conf. Peds. (#/hr)	13		110	110		13	53		19	19		53
Conf. Bikes (#/hr)			16			5			13			18
Turn Type	Prot			Prot		pm+pt		pm+ov	Perm		pm+ov	
Protected Phases	5	2		1	6	3	8	1		4	4	5
Permitted Phases						8		8	4			4
Actuated Green, G (s)	30.0	91.5		5.0	66.5	37.1	37.1	42.1	28.1	28.1	58.1	
Effective Green, g (s)	30.0	93.0		5.0	68.0	40.0	40.0	45.0	31.0	31.0	61.0	
Actuated g/C Ratio	0.20	0.62		0.03	0.45	0.27	0.27	0.30	0.21	0.21	0.41	
Clearance Time (s)	4.0	5.5		4.0	5.5	4.0	6.9	4.0	6.9	6.9	4.0	
Vehicle Extension (s)	1.0	4.0		1.0	4.0	3.0	2.0	1.0	2.0	2.0	1.0	
Lane Grp Cap (vph)	434	2396		72	1802	136	596	312	70	462	678	
v/s Ratio Prot	c0.47	c1.30		0.01	c0.85	c0.07	0.26	0.02		0.14	0.11	
v/s Ratio Perm						0.48		0.13	c1.56		0.11	
v/c Ratio	2.32	2.09		0.25	1.89	2.04	0.99	0.46	7.54	0.68	0.53	
Uniform Delay, d1	60.0	28.5		70.7	41.0	56.5	54.8	42.6	59.5	55.0	33.6	
Progression Factor	0.72	0.40		1.26	0.65	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	596.9	490.7		0.1	398.7	494.5	33.8	0.4	2973.6	3.3	0.3	
Delay (s)	640.0	502.2		88.9	425.6	551.0	88.6	43.0	3033.1	58.3	33.9	
Level of Service	F	F		F	F	F	F	D	F	E	C	
Approach Delay (s)		525.3			423.8		209.3			1355.6		
Approach LOS		F			F		F			F		

Intersection Summary			
HCM Average Control Delay	553.7	HCM Level of Service	F
HCM Volume to Capacity ratio	3.49		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	194.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑↑↑		↔	↑↑↑		↔	↑↑		↔	↑↑	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.86		0.97	0.81		1.00	0.95		1.00	0.95	
Fr _t	1.00	0.99		1.00	0.99		1.00	0.93		1.00	0.98	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	4026		2168	4738		1118	2082		1118	2190	
Fl _t Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1118	4026		2168	4738		1118	2082		1118	2190	
Volume (vph)	86	3683	132	156	3149	122	131	490	412	360	1144	176
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	88	3758	135	159	3213	124	134	500	420	367	1167	180
RTOR Reduction (vph)	0	3	0	0	4	0	0	100	0	0	0	0
Lane Group Flow (vph)	88	3890	0	159	3333	0	134	820	0	367	1347	0
Turn Type	Prot		Prot		Prot		Prot		Prot			
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	12.0	68.5		15.0	71.5		17.0	33.0		14.0	30.0	
Effective Green, g (s)	12.0	70.0		15.0	73.0		17.0	35.0		14.0	32.0	
Actuated g/C Ratio	0.08	0.47		0.10	0.49		0.11	0.23		0.09	0.21	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	1.0	4.0		1.0	4.0		1.0	4.0		1.0	4.0	
Lane Grp Cap (vph)	89	1879		217	2306		127	486		104	467	
v/s Ratio Prot	0.08	c0.97		0.07	c0.70		0.12	c0.39		c0.33	c0.61	
v/s Ratio Perm												
v/c Ratio	0.99	2.07		0.73	1.45		1.06	1.69		3.53	2.88	
Uniform Delay, d ₁	68.9	40.0		65.6	38.5		66.5	57.5		68.0	59.0	
Progression Factor	1.02	1.15		0.60	0.31		1.00	1.00		1.00	1.00	
Incremental Delay, d ₂	25.5	481.7		1.0	200.6		95.4	317.7		1161.6	853.8	
Delay (s)	96.0	527.8		40.3	212.6		161.9	375.2		1229.6	912.8	
Level of Service	F	F		D	F		F	F		F	F	
Approach Delay (s)		518.3			204.8			348.1			980.7	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	471.2	HCM Level of Service	F
HCM Volume to Capacity ratio	2.20		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	182.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕	↖	↖	↕↕	↖	↖	↕↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	4521		1583	4550	1417	1583	3167	1417	1583	3128	
Flt Permitted	0.11	1.00		0.95	1.00	1.00	0.11	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	190	4521		1583	4550	1417	189	3167	1417	189	3128	
Volume (vph)	55	2304	102	95	2363	139	191	1153	275	44	1021	91
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	57	2400	106	99	2461	145	199	1201	286	46	1064	95
RTOR Reduction (vph)	0	5	0	0	0	9	0	0	92	0	1	0
Lane Group Flow (vph)	57	2501	0	99	2461	136	199	1201	194	46	1158	0
Turn Type	Perm			Prot		Perm	Perm		Perm	Perm		
Protected Phases	8			7	4			6			2	
Permitted Phases	8					4	6		6		2	
Actuated Green, G (s)	34.1	34.1		8.1	45.7	45.7	34.3	34.3	34.3	34.3	34.3	
Effective Green, g (s)	35.1	35.1		7.6	46.7	46.7	35.3	35.3	35.3	35.3	35.3	
Actuated g/C Ratio	0.39	0.39		0.08	0.52	0.52	0.39	0.39	0.39	0.39	0.39	
Clearance Time (s)	5.0	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	74	1763		134	2361	735	74	1242	556	74	1227	
v/s Ratio Prot	c0.55			0.06	c0.54			0.38			0.37	
v/s Ratio Perm	0.30					0.10	c1.05		0.14	0.24		
v/c Ratio	0.77	1.42		0.74	1.04	0.19	2.69	0.97	0.35	0.62	0.94	
Uniform Delay, d1	23.9	27.4		40.2	21.6	11.5	27.4	26.8	19.3	22.0	26.4	
Progression Factor	0.90	0.83		0.89	1.70	2.13	0.67	0.64	0.33	1.00	1.00	
Incremental Delay, d2	37.1	190.5		6.1	23.5	0.2	763.6	3.2	0.2	33.4	15.4	
Delay (s)	58.6	213.4		41.8	60.2	24.8	782.0	20.4	6.5	55.4	41.8	
Level of Service	E	F		D	E	C	F	C	A	E	D	
Approach Delay (s)	210.0			57.6			107.9			42.3		
Approach LOS	F			E			F			D		

Intersection Summary

HCM Average Control Delay	113.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.97		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	119.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑↑		↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	4525		1583	3120		1583	3167	1417
Flt Permitted	0.14	1.00	1.00	0.12	1.00		0.95	1.00		0.14	1.00	1.00
Satd. Flow (perm)	228	4550	1417	201	4525		1583	3120		238	3167	1417
Volume (vph)	179	2064	93	102	1578	60	222	1519	167	91	1047	106
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	183	2106	95	104	1610	61	227	1550	170	93	1068	108
RTOR Reduction (vph)	0	0	32	0	5	0	0	10	0	0	0	30
Lane Group Flow (vph)	183	2106	63	104	1666	0	227	1711	0	93	1068	78
Turn Type	Perm		pm+ov	pm+pt			Prot			Perm		Perm
Protected Phases		6	3	5	2		3	8			4	
Permitted Phases	6		6	2						4		4
Actuated Green, G (s)	27.7	27.7	41.2	35.5	35.5		13.5	44.5		27.5	27.5	27.5
Effective Green, g (s)	29.2	29.2	42.2	37.0	37.0		13.0	45.0		28.0	28.0	28.0
Actuated g/C Ratio	0.32	0.32	0.47	0.41	0.41		0.14	0.50		0.31	0.31	0.31
Clearance Time (s)	5.5	5.5	3.5	3.0	5.5		3.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	2.0	3.0	3.0		2.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	1476	727	141	1860		229	1560		74	985	441
v/s Ratio Prot		0.46	0.01	0.03	c0.37		0.14	c0.55			0.34	
v/s Ratio Perm	c0.80		0.03	0.27						c0.39		0.05
v/c Ratio	2.47	1.43	0.09	0.74	0.90		0.99	1.10		1.26	1.08	0.18
Uniform Delay, d1	30.4	30.4	13.2	22.8	24.7		38.4	22.5		31.0	31.0	22.6
Progression Factor	1.00	1.00	1.00	2.10	1.52		1.00	1.00		0.69	0.71	0.48
Incremental Delay, d2	701.4	196.1	0.0	1.9	0.7		56.7	54.0		146.9	44.6	0.3
Delay (s)	731.8	226.5	13.3	49.7	38.3		95.2	76.5		168.3	66.5	11.2
Level of Service	F	F	B	D	D		F	E		F	E	B
Approach Delay (s)		256.8			39.0			78.6			69.2	
Approach LOS		F			D			E			E	

Intersection Summary

HCM Average Control Delay	125.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	125.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↘		↘	↗↘	↗	↘	↗↘	↗	↗↘	↗↘	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	0.86	0.86	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (prot)	1303	3730		1304	3747	1141	1304	2608	1144	2243	2264	
Flt Permitted	0.07	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (perm)	96	3730		1304	3747	1141	1304	2608	1144	2243	2264	
Volume (vph)	32	1784	43	87	1646	1249	145	130	194	1456	235	28
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	34	1898	46	93	1751	1329	154	138	206	1549	250	30
RTOR Reduction (vph)	0	2	0	0	0	462	0	0	0	0	2	0
Lane Group Flow (vph)	34	1942	0	93	1751	867	154	138	206	1033	794	0
Conf. Peds. (#/hr)	5		9	9		5	56		6	6		56
Conf. Bikes (#/hr)			4			5			8			8
Turn Type	Perm			Prot		Perm	Split		pm+ov	Split		
Protected Phases		6		5	2		3	3	5	4	4	
Permitted Phases	6					2			3			
Actuated Green, G (s)	56.0	56.0		10.0	70.0	70.0	15.0	15.0	25.0	50.0	50.0	
Effective Green, g (s)	57.0	57.0		10.0	71.0	71.0	16.0	16.0	26.0	51.0	51.0	
Actuated g/C Ratio	0.38	0.38		0.07	0.47	0.47	0.11	0.11	0.17	0.34	0.34	
Clearance Time (s)	5.0	5.0		4.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0		2.0	4.0	4.0	2.0	2.0	2.0	4.0	4.0	
Lane Grp Cap (vph)	36	1417		87	1774	540	139	278	198	763	770	
v/s Ratio Prot		0.52		0.07	0.47		c0.12	0.05	0.07	c0.46	0.35	
v/s Ratio Perm	0.35					c0.76			0.11			
v/c Ratio	0.94	1.37		1.07	0.99	1.60	1.11	0.50	1.04	1.35	1.27dl	
Uniform Delay, d1	45.0	46.5		70.0	39.0	39.5	67.0	63.2	62.0	49.5	49.5	
Progression Factor	1.39	1.40		1.09	1.12	6.77	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	107.7	169.9		49.2	4.1	272.9	108.2	0.5	75.0	167.8	40.7	
Delay (s)	170.1	234.8		125.7	47.9	540.5	175.2	63.7	137.0	217.3	90.2	
Level of Service	F	F		F	D	F	F	E	F	F	F	
Approach Delay (s)		233.7			256.5			128.5			162.0	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	218.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	143.5%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
 c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑	↗		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	0.99		1.00	1.00	0.85		1.00			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.99	
Satd. Flow (prot)	1583	4500		1583	3167	1417		1643			3094	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.47			0.54	
Satd. Flow (perm)	1583	4500		1583	3167	1417		784			1707	
Volume (vph)	175	1102	86	32	1122	124	118	459	19	159	415	42
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	194	1224	96	36	1247	138	131	510	21	177	461	47
RTOR Reduction (vph)	0	8	0	0	0	79	0	1	0	0	7	0
Lane Group Flow (vph)	194	1312	0	36	1247	59	0	661	0	0	678	0
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2						
Actuated Green, G (s)	10.6	45.7		3.0	38.1	38.1		29.0			29.0	
Effective Green, g (s)	10.6	46.0		3.0	38.4	38.4		29.0			29.0	
Actuated g/C Ratio	0.12	0.51		0.03	0.43	0.43		0.32			0.32	
Clearance Time (s)	4.0	4.3		4.0	4.3	4.3		4.0			4.0	
Vehicle Extension (s)	3.0	5.7		3.0	5.5	5.5		3.0			3.0	
Lane Grp Cap (vph)	186	2300		53	1351	605		253			550	
v/s Ratio Prot	c0.12	0.29		0.02	c0.39							
v/s Ratio Perm						0.04	c0.84					
v/c Ratio	1.04	0.57		0.68	0.92	0.10		2.61			17.70dl	
Uniform Delay, d1	39.7	15.2		43.0	24.4	15.4		30.5			30.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	77.8	1.0		29.4	11.9	0.3		737.6			120.0	
Delay (s)	117.5	16.2		72.4	36.3	15.8		768.1			150.5	
Level of Service	F	B		E	D	B		F			F	
Approach Delay (s)	29.2			35.2				768.1			150.5	
Approach LOS	C			D				F			F	

Intersection Summary

HCM Average Control Delay	164.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	113.9%	ICU Level of Service	H
Analysis Period (min)	15		
dl	Defacto Left Lane. Recode with 1 though lane as a left lane.		
dr	Defacto Right Lane. Recode with 1 though lane as a right lane.		
c	Critical Lane Group		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑	↗	↗	↑↑	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.91	1.00	0.95	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.97	1.00	1.00	0.96	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	3726		1304	3683		1263	2608	1062	1252	2367	
Flt Permitted	0.07	1.00		0.10	1.00		0.25	1.00	1.00	0.43	1.00	
Satd. Flow (perm)	90	3726		135	3683		332	2608	1062	573	2367	
Volume (vph)	223	1556	36	108	1760	88	113	345	212	160	386	189
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	237	1655	38	115	1872	94	120	367	226	170	411	201
RTOR Reduction (vph)	0	1	0	0	4	0	0	0	19	0	10	0
Lane Group Flow (vph)	237	1692	0	115	1962	0	120	367	207	170	602	0
Conf. Peds. (#/hr)	67		48	48		67	40		47	47		40
Conf. Bikes (#/hr)			7			2			2			5
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		6			2			8				4
Permitted Phases	6			2			8		8		4	
Actuated Green, G (s)	95.5	95.5		95.5	95.5		46.0	46.0	46.0	46.0	46.0	
Effective Green, g (s)	96.0	96.0		96.0	96.0		46.0	46.0	46.0	46.0	46.0	
Actuated g/C Ratio	0.64	0.64		0.64	0.64		0.31	0.31	0.31	0.31	0.31	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	58	2385		86	2357		102	800	326	176	726	
v/s Ratio Prot		0.45			0.53			0.14			0.25	
v/s Ratio Perm	c2.64			0.85			c0.36		0.20	0.30		
v/c Ratio	4.09	0.71		1.34	0.83		1.18	0.46	0.64	0.97	0.83	
Uniform Delay, d1	27.0	17.8		27.0	20.8		52.0	42.0	44.8	51.2	48.3	
Progression Factor	1.00	1.00		1.49	1.56		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1428.7	1.8		177.7	1.4		144.2	1.9	9.1	59.4	10.5	
Delay (s)	1455.7	19.6		217.9	33.8		196.2	43.8	53.9	110.7	58.9	
Level of Service	F	B		F	C		F	D	D	F	E	
Approach Delay (s)		196.0			44.0			72.7			70.1	
Approach LOS		F			D			E			E	

Intersection Summary

HCM Average Control Delay	104.7	HCM Level of Service	F
HCM Volume to Capacity ratio	3.16		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	113.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.93			0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1544			1602		1583	1649		1583	1667	1417
Flt Permitted		0.94			0.86		0.44	1.00		0.35	1.00	1.00
Satd. Flow (perm)		1467			1384		730	1649		579	1667	1417
Volume (vph)	36	89	123	33	93	34	181	536	41	43	449	59
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	97	134	36	101	37	197	583	45	47	488	64
RTOR Reduction (vph)	0	68	0	0	19	0	0	4	0	0	0	22
Lane Group Flow (vph)	0	202	0	0	155	0	197	625	0	47	488	42
Turn Type		Perm		Perm		Perm		Perm		Perm		Perm
Protected Phases		8		4		4		2		6		6
Permitted Phases	8			4		2		6		6		6
Actuated Green, G (s)		12.5			12.5		38.7	38.7		38.7		38.7
Effective Green, g (s)		13.0			13.0		39.0	39.0		39.0		39.0
Actuated g/C Ratio		0.22			0.22		0.65	0.65		0.65		0.65
Clearance Time (s)		4.5			4.5		4.3	4.3		4.3		4.3
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0		3.0
Lane Grp Cap (vph)		318			300		475	1072		376	1084	921
v/s Ratio Prot							c0.38				0.29	
v/s Ratio Perm		c0.14			0.11		0.27			0.08		0.03
v/c Ratio		0.63			0.52		0.41	0.58		0.12	0.45	0.05
Uniform Delay, d1		21.3			20.7		5.0	5.9		4.0	5.2	3.8
Progression Factor		1.00			1.00		0.50	0.49		1.00	1.00	1.00
Incremental Delay, d2		4.1			1.5		1.0	0.9		0.7	1.4	0.1
Delay (s)		25.5			22.2		3.5	3.8		4.7	6.5	3.9
Level of Service		C			C		A	A		A	A	A
Approach Delay (s)		25.5			22.2		3.7			6.1		
Approach LOS		C			C		A			A		

Intersection Summary

HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑	↖	↖	↖	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	3714		1304	3709		1304	1373	1167	1304	1356	
Flt Permitted	0.17	1.00		0.17	1.00		0.31	1.00	1.00	0.26	1.00	
Satd. Flow (perm)	239	3714		239	3709		422	1373	1167	350	1356	
Volume (vph)	39	1394	87	73	1773	128	109	587	120	71	483	43
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	41	1452	91	76	1847	133	114	611	125	74	503	45
RTOR Reduction (vph)	0	12	0	0	14	0	0	0	3	0	1	0
Lane Group Flow (vph)	41	1531	0	76	1966	0	114	611	122	74	547	0
Turn Type	Perm			Perm			Perm			Perm	Perm	
Protected Phases	2			2			4			4	4	
Permitted Phases	2			2			4			4	4	
Actuated Green, G (s)	22.4	22.4		22.4	22.4		28.0	28.0	28.0	28.0	28.0	
Effective Green, g (s)	23.0	23.0		23.0	23.0		29.0	29.0	29.0	29.0	29.0	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.48	0.48	0.48	0.48	0.48	
Clearance Time (s)	4.6	4.6		4.6	4.6		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)	92	1424		92	1422		204	664	564	169	655	
v/s Ratio Prot		0.41			c0.53			c0.45			0.40	
v/s Ratio Perm	0.17			0.32			0.27		0.10	0.21		
v/c Ratio	0.45	1.08		0.83	1.38		0.56	0.92	0.22	0.44	0.84	
Uniform Delay, d1	13.8	18.5		16.7	18.5		11.0	14.4	8.9	10.2	13.4	
Progression Factor	1.00	1.00		1.29	1.55		1.00	1.00	1.00	0.68	0.76	
Incremental Delay, d2	14.8	46.9		43.6	175.6		10.6	20.1	0.9	7.1	10.7	
Delay (s)	28.6	65.4		65.2	204.3		21.6	34.5	9.8	13.9	20.9	
Level of Service	C	E		E	F		C	C	A	B	C	
Approach Delay (s)		64.5			199.1			29.1			20.0	
Approach LOS		E			F			C			C	

Intersection Summary

HCM Average Control Delay	107.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	135.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑	↗	↘	↑↑		↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.86	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4473		1583	5733	1417	1583	3046		1583	3167	1417
Flt Permitted	0.10	1.00		0.12	1.00	1.00	0.32	1.00		0.12	1.00	1.00
Satd. Flow (perm)	167	4473		203	5733	1417	541	3046		208	3167	1417
Volume (vph)	22	1163	147	131	1821	272	394	924	316	372	572	81
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	22	1187	150	134	1858	278	402	943	322	380	584	83
RTOR Reduction (vph)	0	18	0	0	0	15	0	17	0	0	0	7
Lane Group Flow (vph)	22	1319	0	134	1858	263	402	1248	0	380	584	76
Turn Type	Perm			Perm		pm+ov	pm+pt			pm+pt		Perm
Protected Phases		6			2	7	3	8		7	4	
Permitted Phases	6			2		2	8			4		4
Actuated Green, G (s)	39.0	39.0		39.0	39.0	45.0	36.1	30.1		36.1	30.1	30.1
Effective Green, g (s)	40.0	40.0		40.0	40.0	46.0	38.0	32.0		38.0	32.0	32.0
Actuated g/C Ratio	0.44	0.44		0.44	0.44	0.51	0.42	0.36		0.42	0.36	0.36
Clearance Time (s)	5.0	5.0		5.0	5.0	4.0	4.0	5.9		4.0	5.9	5.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	1988		90	2548	787	298	1083		179	1126	504
v/s Ratio Prot		0.29			0.32	0.02	0.09	0.41		c0.14	0.18	
v/s Ratio Perm	0.13			c0.66		0.16	0.48			c0.75		0.05
v/c Ratio	0.30	0.66		1.49	0.73	0.33	1.35	1.15		2.12	0.52	0.15
Uniform Delay, d1	16.0	19.7		25.0	20.5	13.0	24.8	29.0		24.0	22.9	19.7
Progression Factor	1.00	1.00		1.24	1.26	1.85	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	10.0	1.8		225.4	0.2	0.0	177.7	79.3		523.7	1.7	0.6
Delay (s)	26.0	21.5		256.4	26.2	24.1	202.5	108.3		547.6	24.6	20.4
Level of Service	C	C		F	C	C	F	F		F	C	C
Approach Delay (s)		21.5			39.5			131.0			214.1	
Approach LOS		C			D			F			F	

Intersection Summary

HCM Average Control Delay	88.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	0.99		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3713		1304	3747	1256	
Flt Permitted	1.00		0.08	1.00	0.97	
Satd. Flow (perm)	3713		104	3747	1256	
Volume (vph)	1676	109	47	1862	180	139
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1746	114	49	1940	188	145
RTOR Reduction (vph)	7	0	0	0	11	0
Lane Group Flow (vph)	1853	0	49	1940	322	0
Turn Type			Perm			
Protected Phases	6			2	4	
Permitted Phases			2			
Actuated Green, G (s)	55.1		55.1	55.1	26.1	
Effective Green, g (s)	55.2		55.2	55.2	26.8	
Actuated g/C Ratio	0.61		0.61	0.61	0.30	
Clearance Time (s)	4.1		4.1	4.1	4.7	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2277		64	2298	374	
v/s Ratio Prot	0.50			c0.52	c0.26	
v/s Ratio Perm			0.47			
v/c Ratio	0.81		0.77	0.84	0.86	
Uniform Delay, d1	13.4		12.7	14.0	29.9	
Progression Factor	0.42		1.00	1.00	1.00	
Incremental Delay, d2	2.7		58.9	4.0	18.1	
Delay (s)	8.4		71.6	18.0	47.9	
Level of Service	A		E	B	D	
Approach Delay (s)	8.4			19.3	47.9	
Approach LOS	A			B	D	

Intersection Summary			
HCM Average Control Delay	16.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.98			1.00	0.96
Flpb, ped/bikes	1.00	1.00		0.99	1.00			0.99			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.91			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.98	1.00
Satd. Flow (prot)	1300	3738		1295	3739			1202			1339	1123
Flt Permitted	0.08	1.00		0.12	1.00			0.92			0.93	1.00
Satd. Flow (perm)	108	3738		159	3739			1120			1270	1123
Volume (vph)	6	1594	14	33	1877	16	39	10	88	2	3	4
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	6	1660	15	34	1955	17	41	10	92	2	3	4
RTOR Reduction (vph)	0	1	0	0	1	0	0	15	0	0	0	3
Lane Group Flow (vph)	6	1674	0	34	1971	0	0	128	0	0	5	1
Conf. Peds. (#/hr)	30		38	38		30	24		15	15		24
Conf. Bikes (#/hr)			2			4			2			
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	65.4	65.4		65.4	65.4			16.6			16.6	16.6
Effective Green, g (s)	65.4	65.4		65.4	65.4			16.6			16.6	16.6
Actuated g/C Ratio	0.73	0.73		0.73	0.73			0.18			0.18	0.18
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	78	2716		116	2717			207			234	207
v/s Ratio Prot		0.45			c0.53							
v/s Ratio Perm	0.06			0.21				c0.11			0.00	0.00
v/c Ratio	0.08	0.62		0.29	0.73			0.62			0.02	0.00
Uniform Delay, d1	3.6	6.1		4.3	7.1			33.8			30.0	30.0
Progression Factor	2.65	3.03		0.84	0.75			1.00			1.00	1.00
Incremental Delay, d2	0.2	0.1		3.2	0.9			5.4			0.0	0.0
Delay (s)	9.6	18.6		6.8	6.2			39.2			30.1	30.0
Level of Service	A	B		A	A			D			C	C
Approach Delay (s)		18.5			6.2			39.2			30.0	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↓
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (prot)	3167	1417	1583	3167	3024	
Flt Permitted	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (perm)	3167	1417	1583	3167	3024	
Volume (vph)	1412	814	94	1467	410	86
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	1518	875	101	1577	441	92
RTOR Reduction (vph)	0	75	0	0	20	0
Lane Group Flow (vph)	1518	800	101	1577	513	0
Turn Type		pt+ov	Prot			
Protected Phases	2	2 4	1	6	4	
Permitted Phases						
Actuated Green, G (s)	40.8	73.9	9.0	37.3	29.2	
Effective Green, g (s)	40.7	73.5	8.5	37.2	28.8	
Actuated g/C Ratio	0.45	0.82	0.09	0.41	0.32	
Clearance Time (s)	3.9		3.5	3.9	3.6	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1432	1157	150	1309	968	
v/s Ratio Prot	c0.48	c0.56	c0.06	c0.50	0.17	
v/s Ratio Perm						
v/c Ratio	1.06	0.69	0.67	1.20	0.53	
Uniform Delay, d1	24.6	3.5	39.4	26.4	25.1	
Progression Factor	0.76	1.00	1.00	1.00	1.00	
Incremental Delay, d2	36.9	1.1	11.3	99.6	0.5	
Delay (s)	55.6	4.6	50.7	126.0	25.6	
Level of Service	E	A	D	F	C	
Approach Delay (s)	36.9			121.5	25.6	
Approach LOS	D			F	C	

Intersection Summary

HCM Average Control Delay	66.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑		↙	↑↑↑		↙	↑↑		↙	↑↑	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	3683		1304	3669		1304	2552		1301	2434	
Flt Permitted	0.14	1.00		0.14	1.00		0.13	1.00		0.19	1.00	
Satd. Flow (perm)	188	3683		188	3669		178	2552		259	2434	
Volume (vph)	129	1395	87	159	1573	64	308	745	79	95	732	267
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	133	1438	90	164	1622	66	318	768	81	98	755	275
RTOR Reduction (vph)	0	7	0	0	5	0	0	8	0	0	41	0
Lane Group Flow (vph)	133	1521	0	164	1683	0	318	841	0	98	989	0
Conf. Peds. (#/hr)	147		85	85		147	78		51	51		78
Conf. Bikes (#/hr)			5			5			5			3
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt		pm+pt			
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	34.2	28.2		34.2	28.2		41.8	29.8		33.8	25.8	
Effective Green, g (s)	35.2	29.2		35.2	29.2		42.8	30.8		34.8	26.8	
Actuated g/C Ratio	0.39	0.32		0.39	0.32		0.48	0.34		0.39	0.30	
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	148	1195		148	1190		235	873		193	725	
v/s Ratio Prot	0.06	0.41		c0.07	c0.46		c0.18	0.33		0.05	0.41	
v/s Ratio Perm	0.29			0.36			c0.46			0.15		
v/c Ratio	0.90	1.27		1.11	1.41		1.35	0.96		0.51	1.36	
Uniform Delay, d1	23.7	30.4		24.9	30.4		24.7	29.0		19.3	31.6	
Progression Factor	1.23	0.88		1.44	0.85		1.39	1.37		1.00	1.00	
Incremental Delay, d2	35.7	127.4		92.8	190.0		176.9	17.0		2.1	172.9	
Delay (s)	64.7	154.3		128.5	215.9		211.3	57.0		21.3	204.5	
Level of Service	E	F		F	F		F	E		C	F	
Approach Delay (s)		147.1			208.1			99.0			188.5	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	165.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	130.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frbp, ped/bikes		0.98			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.91			0.97			1.00			1.00	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1482			1585			3139			3150	
Flt Permitted		0.93			0.76			0.82			0.93	
Satd. Flow (perm)		1389			1215			2589			2930	
Volume (vph)	24	51	130	45	103	40	58	1155	35	14	1050	21
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	26	55	140	48	111	43	62	1242	38	15	1129	23
RTOR Reduction (vph)	0	74	0	0	12	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	147	0	0	190	0	0	1340	0	0	1166	0
Conf. Peds. (#/hr)	10		8	8		10	19		14	14		19
Conf. Bikes (#/hr)			6			4			4			3
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.4			16.4			65.2			65.2	
Effective Green, g (s)		16.4			16.4			65.6			65.6	
Actuated g/C Ratio		0.18			0.18			0.73			0.73	
Clearance Time (s)		4.0			4.0			4.4			4.4	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		253			221			1887			2136	
v/s Ratio Prot												
v/s Ratio Perm		0.11			0.16			0.52			0.40	
v/c Ratio		0.58			0.86			0.71			0.55	
Uniform Delay, d1		33.7			35.7			6.9			5.5	
Progression Factor		1.00			1.00			1.00			0.63	
Incremental Delay, d2		3.4			26.5			2.3			0.1	
Delay (s)		37.1			62.2			9.2			3.5	
Level of Service		D			E			A			A	
Approach Delay (s)		37.1			62.2			9.2			3.5	
Approach LOS		D			E			A			A	

Intersection Summary

HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	103.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑		↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00		0.91		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85		0.98		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	2608	1167		3662		1304	2608	1167	1304	2603	
Flt Permitted	0.07	1.00	1.00		1.00		0.16	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	102	2608	1167		3662		215	2608	1167	238	2603	
Volume (vph)	38	1023	82	0	1587	283	82	968	119	182	1001	13
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	1077	86	0	1671	298	86	1019	125	192	1054	14
RTOR Reduction (vph)	0	0	32	0	21	0	0	0	23	0	1	0
Lane Group Flow (vph)	40	1077	54	0	1948	0	86	1019	102	192	1067	0
Turn Type	Perm		Perm				Perm		Perm	Perm		
Protected Phases	4		8				2		2	6		
Permitted Phases	4		4				2		2	6		
Actuated Green, G (s)	53.0	53.0	53.0		53.0		57.0	57.0	57.0	57.0	57.0	
Effective Green, g (s)	54.0	54.0	54.0		54.0		58.0	58.0	58.0	58.0	58.0	
Actuated g/C Ratio	0.45	0.45	0.45		0.45		0.48	0.48	0.48	0.48	0.48	
Clearance Time (s)	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	46	1174	525		1648		104	1261	564	115	1258	
v/s Ratio Prot	0.41		c0.53				0.39		0.41			
v/s Ratio Perm	0.39		0.05				0.40		0.09		c0.81	
v/c Ratio	0.87	0.92	0.10		1.18		0.83	0.81	0.18	1.67	0.85	
Uniform Delay, d1	29.8	30.9	19.0		33.0		26.7	26.3	17.6	31.0	27.2	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	97.8	12.7	0.4		88.5		50.3	5.6	0.7	336.3	7.2	
Delay (s)	127.6	43.6	19.4		121.5		76.9	31.9	18.3	367.3	34.4	
Level of Service	F	D	B		F		E	C	B	F	C	
Approach Delay (s)	44.7		121.5				33.7		85.1			
Approach LOS	D		F				C		F			

Intersection Summary

HCM Average Control Delay	78.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	115.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘↗	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	3072	4550	1417	1583	3167	1417	1583	3167	1417
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1583	4550	1417	3072	4550	1417	1583	3167	1417	1583	3167	1417
Volume (vph)	151	1414	227	230	1872	208	527	1309	207	297	1133	131
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	154	1443	232	235	1910	212	538	1336	211	303	1156	134
RTOR Reduction (vph)	0	0	12	0	0	100	0	0	5	0	0	0
Lane Group Flow (vph)	154	1443	220	235	1910	112	538	1336	206	303	1156	134
Turn Type	Prot	pm+ov		Prot	Perm		Prot	pm+ov		Prot	pm+ov	
Protected Phases	3	8	1	7	4		1	6	7	5	2	3
Permitted Phases		8			4			6			2	
Actuated Green, G (s)	13.0	37.6	50.6	12.4	37.0	37.0	13.0	37.0	49.4	13.0	37.0	50.0
Effective Green, g (s)	13.0	39.6	52.6	12.4	39.0	39.0	13.0	39.0	51.4	13.0	39.0	52.0
Actuated g/C Ratio	0.11	0.33	0.44	0.10	0.32	0.32	0.11	0.32	0.43	0.11	0.32	0.43
Clearance Time (s)	4.0	6.0	4.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0
Vehicle Extension (s)	3.0	4.7	3.0	3.0	5.0	5.0	3.0	4.5	3.0	3.0	4.6	3.0
Lane Grp Cap (vph)	171	1502	668	317	1479	461	171	1029	654	171	1029	661
v/s Ratio Prot	c0.10	0.32	0.04	0.08	c0.42		c0.34	c0.42	0.03	0.19	0.37	0.02
v/s Ratio Perm			0.12			0.08			0.11			0.07
v/c Ratio	0.90	0.96	0.33	0.74	1.29	0.24	3.15	1.30	0.32	1.77	1.12	0.20
Uniform Delay, d1	52.9	39.4	22.1	52.2	40.5	29.7	53.5	40.5	22.7	53.5	40.5	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	41.5	15.1	0.3	9.0	136.3	0.6	981.0	141.5	0.3	370.1	68.5	0.2
Delay (s)	94.4	54.5	22.4	61.2	176.8	30.3	1034.5	182.0	23.0	423.6	109.0	21.3
Level of Service	F	D	C	E	F	C	F	F	C	F	F	C
Approach Delay (s)		53.8		152.1			385.9			161.4		
Approach LOS		D		F			F			F		

Intersection Summary

HCM Average Control Delay	193.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	130.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↘	↕		↘	↕		↘	↕	↘
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.98		1.00	0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	3101		1583	3077		1583	4494		1583	3167	1417
Flt Permitted	0.17	1.00		0.17	1.00		0.11	1.00		0.13	1.00	1.00
Satd. Flow (perm)	286	3101		285	3077		182	4494		208	3167	1417
Volume (vph)	157	1016	164	160	875	205	314	1178	106	89	1096	169
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	159	1026	166	162	884	207	317	1190	107	90	1107	171
RTOR Reduction (vph)	0	15	0	0	23	0	0	11	0	0	0	11
Lane Group Flow (vph)	159	1177	0	162	1068	0	317	1286	0	90	1107	160
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		pm+ov
Protected Phases	1	6		5	2		3	8		7	4	1
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	30.7	22.3		30.9	22.4		44.2	35.7		40.2	33.7	42.1
Effective Green, g (s)	31.2	23.3		31.4	23.4		44.7	36.7		40.7	34.7	42.6
Actuated g/C Ratio	0.35	0.26		0.35	0.26		0.50	0.41		0.45	0.39	0.47
Clearance Time (s)	3.5	5.0		3.5	5.0		3.5	5.0		3.5	5.0	3.5
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	4.3		3.0	4.6	3.0
Lane Grp Cap (vph)	213	803		215	800		215	1833		186	1221	734
v/s Ratio Prot	0.07	c0.38		c0.07	0.35		c0.13	0.29		0.03	0.35	0.02
v/s Ratio Perm	0.19			0.20			c0.60			0.19		0.09
v/c Ratio	0.75	1.47		0.75	1.34		1.47	0.70		0.48	0.91	0.22
Uniform Delay, d1	24.4	33.4		41.6	33.3		21.9	22.1		15.6	26.1	13.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	13.3	216.5		13.9	159.3		236.9	1.4		2.0	10.2	0.2
Delay (s)	37.7	249.9		55.5	192.6		258.8	23.5		17.6	36.3	14.1
Level of Service	D	F		E	F		F	C		B	D	B
Approach Delay (s)		224.9			174.8			69.7			32.3	
Approach LOS		F			F			E			C	

Intersection Summary

HCM Average Control Delay	121.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	113.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	↵
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	2583		1304	2608	1304	1167
Flt Permitted	1.00		0.15	1.00	0.95	1.00
Satd. Flow (perm)	2583		212	2608	1304	1167
Volume (vph)	1107	76	227	1807	83	240
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	1216	84	249	1986	91	264
RTOR Reduction (vph)	5	0	0	0	0	48
Lane Group Flow (vph)	1295	0	249	1986	91	216
Turn Type			Perm			Perm
Protected Phases	5			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	57.8		57.8	57.8	24.2	24.2
Effective Green, g (s)	57.8		57.8	57.8	24.2	24.2
Actuated g/C Ratio	0.64		0.64	0.64	0.27	0.27
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	4.0		4.0	4.0	3.0	3.0
Lane Grp Cap (vph)	1659		136	1675	351	314
v/s Ratio Prot	0.50			0.76	0.07	
v/s Ratio Perm			c1.17			c0.18
v/c Ratio	0.78		1.83	1.19	0.26	0.69
Uniform Delay, d1	11.6		16.1	16.1	25.9	29.5
Progression Factor	1.62		1.79	1.80	1.00	1.00
Incremental Delay, d2	2.7		376.5	84.2	0.4	6.1
Delay (s)	21.4		405.3	113.1	26.3	35.6
Level of Service	C		F	F	C	D
Approach Delay (s)	21.4			145.6	33.2	
Approach LOS	C			F	C	

Intersection Summary

HCM Average Control Delay	93.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.98		1.00	1.00			0.91			0.94	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1583	3115		1583	3160			1514			1566	
Flt Permitted	0.13	1.00		0.31	1.00			0.99			0.98	
Satd. Flow (perm)	224	3115		521	3160			1497			1533	
Volume (vph)	14	717	88	251	1414	19	6	27	63	10	65	55
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	15	771	95	270	1520	20	6	29	68	11	70	59
RTOR Reduction (vph)	0	6	0	0	0	0	0	58	0	0	25	0
Lane Group Flow (vph)	15	860	0	270	1540	0	0	45	0	0	115	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		2		2		4		4		4	
Permitted Phases	2		2		4		4		4		4	
Actuated Green, G (s)	68.6	68.6		68.6	68.6			12.2			12.2	
Effective Green, g (s)	68.9	68.9		68.9	68.9			13.1			13.1	
Actuated g/C Ratio	0.77	0.77		0.77	0.77			0.15			0.15	
Clearance Time (s)	4.3	4.3		4.3	4.3			4.9			4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	171	2385		399	2419			218			223	
v/s Ratio Prot		0.28			0.49							
v/s Ratio Perm	0.07			c0.52				0.03			c0.08	
v/c Ratio	0.09	0.36		0.68	0.64			0.21			0.52	
Uniform Delay, d1	2.7	3.4		5.1	4.8			33.9			35.5	
Progression Factor	0.43	0.45		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.9	0.4		8.9	1.3			0.5			2.0	
Delay (s)	2.0	1.9		14.0	6.1			34.3			37.5	
Level of Service	A	A		B	A			C			D	
Approach Delay (s)		1.9			7.3			34.3			37.5	
Approach LOS		A			A			C			D	

Intersection Summary

HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↗		↘	↑↑↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	1.00	0.84	1.00	1.00	0.72	1.00	0.98		1.00	0.97	
Flpb, ped/bikes	1.00	1.00	1.00	0.98	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3167	1183	1545	3167	1021	1583	4367		1583	4329	
Flt Permitted	0.11	1.00	1.00	0.37	1.00	1.00	0.16	1.00		0.15	1.00	
Satd. Flow (perm)	184	3167	1183	610	3167	1021	268	4367		253	4329	
Volume (vph)	143	525	10	184	1177	53	21	1299	179	37	1546	258
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	147	541	10	190	1213	55	22	1339	185	38	1594	266
RTOR Reduction (vph)	0	0	6	0	0	29	0	20	0	0	25	0
Lane Group Flow (vph)	147	541	5	190	1213	26	22	1504	0	38	1835	0
Conf. Peds. (#/hr)	137		130	130		137	137		130	130		137
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	7	4	5	3	4	1	5	2		1	6	
Permitted Phases	4		4	4		4	2			6		
Actuated Green, G (s)	42.0	35.0	39.0	42.0	35.0	40.4	27.6	23.6		30.4	25.0	
Effective Green, g (s)	43.5	36.3	40.5	43.5	36.3	41.9	29.1	24.9		31.9	26.3	
Actuated g/C Ratio	0.48	0.40	0.45	0.48	0.40	0.47	0.32	0.28		0.35	0.29	
Clearance Time (s)	4.2	5.3	4.2	4.2	5.3	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	201	1277	585	370	1277	521	148	1208		172	1265	
v/s Ratio Prot	c0.06	0.17	0.00	0.04	c0.38	0.00	0.01	0.34		c0.01	c0.42	
v/s Ratio Perm	0.30		0.00	0.21		0.02	0.04			0.06		
v/c Ratio	0.73	0.42	0.01	0.51	0.95	0.05	0.15	1.25		0.22	1.45	
Uniform Delay, d1	18.0	19.3	13.7	14.0	26.0	13.2	24.3	32.5		23.1	31.8	
Progression Factor	0.83	0.96	0.92	1.03	0.89	0.90	1.52	1.21		1.00	1.00	
Incremental Delay, d2	11.0	0.2	0.0	0.9	12.1	0.0	0.3	114.4		0.7	207.3	
Delay (s)	25.9	18.8	12.6	15.3	35.3	11.9	37.4	153.7		23.7	239.2	
Level of Service	C	B	B	B	D	B	D	F		C	F	
Approach Delay (s)		20.2			31.9			152.1			234.9	
Approach LOS		C			C			F			F	

Intersection Summary

HCM Average Control Delay	132.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑↑↑		↕	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.86			0.96		1.00	1.00		1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1442			1549		1583	4540		1583	4549	
Flt Permitted		1.00			0.79		0.09	1.00		0.09	1.00	
Satd. Flow (perm)		1442			1267		142	4540		142	4549	
Volume (vph)	0	0	4	272	8	112	1	1697	25	62	1703	2
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	4	306	9	126	1	1907	28	70	1913	2
RTOR Reduction (vph)	0	2	0	0	4	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	2	0	0	437	0	1	1934	0	70	1915	0
Turn Type	Perm		Perm			Perm			Perm			
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		35.5			35.5		47.5	47.5		47.5	47.5	
Effective Green, g (s)		35.0			35.0		47.0	47.0		47.0	47.0	
Actuated g/C Ratio		0.39			0.39		0.52	0.52		0.52	0.52	
Clearance Time (s)		3.5			3.5		3.5	3.5		3.5	3.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		561			493		74	2371		74	2376	
v/s Ratio Prot		0.00						0.43			0.42	
v/s Ratio Perm					c0.34		0.01			c0.49		
v/c Ratio		0.00			0.89		0.01	0.82		0.95	0.81	
Uniform Delay, d1		16.8			25.6		10.3	17.9		20.3	17.7	
Progression Factor		1.00			1.00		1.00	1.00		1.02	0.74	
Incremental Delay, d2		0.0			20.3		0.3	3.2		20.7	0.3	
Delay (s)		16.8			45.9		10.7	21.1		41.5	13.4	
Level of Service		B			D		B	C		D	B	
Approach Delay (s)		16.8			45.9			21.1			14.4	
Approach LOS		B			D			C			B	

Intersection Summary

HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑↑		↖	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4454		1583	4547		1583	4494		1583	4503	
Flt Permitted	0.13	1.00		0.14	1.00		0.13	1.00		0.12	1.00	
Satd. Flow (perm)	221	4454		233	4547		219	4494		208	4503	
Volume (vph)	291	1149	187	108	2117	10	93	1411	126	182	1389	103
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	306	1209	197	114	2228	11	98	1485	133	192	1462	108
RTOR Reduction (vph)	0	24	0	0	1	0	0	12	0	0	9	0
Lane Group Flow (vph)	306	1382	0	114	2238	0	98	1606	0	192	1561	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	37.2	29.2		34.0	27.6		35.7	29.4		39.1	31.1	
Effective Green, g (s)	37.2	30.2		34.0	28.6		35.7	30.4		39.1	32.1	
Actuated g/C Ratio	0.42	0.34		0.38	0.32		0.40	0.34		0.44	0.36	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	199	1511		171	1461		169	1535		200	1624	
v/s Ratio Prot	c0.12	0.31		0.04	0.49		0.03	c0.36		c0.08	0.35	
v/s Ratio Perm	c0.52			0.21			0.20			0.35		
v/c Ratio	1.54	0.91		0.67	1.53		0.58	1.05		0.96	0.96	
Uniform Delay, d1	23.4	28.2		20.5	30.2		19.9	29.3		20.6	27.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	265.5	8.9		9.4	242.9		4.8	36.1		51.5	14.8	
Delay (s)	288.9	37.0		30.0	273.1		24.7	65.4		72.1	42.7	
Level of Service	F	D		C	F		C	E		E	D	
Approach Delay (s)		82.0			261.3			63.1			45.9	
Approach LOS		F			F			E			D	

Intersection Summary

HCM Average Control Delay	125.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	89.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	122.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3153		1583	3153		1583	4497		1583	4503	
Flt Permitted	0.12	1.00		0.12	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	202	3153		202	3153		171	4497		171	4503	
Volume (vph)	225	935	27	185	1599	46	114	1458	123	155	1862	137
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	256	1062	31	210	1817	52	130	1657	140	176	2116	156
RTOR Reduction (vph)	0	3	0	0	3	0	0	11	0	0	9	0
Lane Group Flow (vph)	256	1090	0	210	1866	0	130	1786	0	176	2263	0
Turn Type	pm+pt		pm+pt		Perm		Perm		Perm		Perm	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	39.1	32.1		39.1	32.1		38.2	38.2		38.2	38.2	
Effective Green, g (s)	39.0	33.0		39.0	33.0		39.0	39.0		39.0	39.0	
Actuated g/C Ratio	0.43	0.37		0.43	0.37		0.43	0.43		0.43	0.43	
Clearance Time (s)	3.0	4.9		3.0	4.9		4.8	4.8		4.8	4.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	180	1156		180	1156		74	1949		74	1951	
v/s Ratio Prot	c0.10	0.35		0.08	c0.59			0.40			0.50	
v/s Ratio Perm	0.52			0.43			0.76			c1.03		
v/c Ratio	1.42	0.94		1.17	1.61		1.76	0.92		2.38	1.16	
Uniform Delay, d1	44.2	27.6		21.8	28.5		25.5	24.0		25.5	25.5	
Progression Factor	2.05	1.35		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	214.6	13.9		119.1	280.6		389.9	7.3		659.7	78.1	
Delay (s)	305.4	51.0		140.9	309.1		415.4	31.2		685.2	103.6	
Level of Service	F	D		F	F		F	C		F	F	
Approach Delay (s)		99.3			292.1			57.2			145.4	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	154.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.98		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	130.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.90			0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99			0.98	
Satd. Flow (prot)	1583	3167	1417	1583	3167	1417		1496			1539	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.99			0.98	
Satd. Flow (perm)	1583	3167	1417	1583	3167	1417		1496			1539	
Volume (vph)	17	552	9	55	1379	64	12	20	86	25	18	36
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	18	594	10	59	1483	69	13	22	92	27	19	39
RTOR Reduction (vph)	0	0	7	0	0	35	0	70	0	0	30	0
Lane Group Flow (vph)	18	594	3	59	1483	34	0	57	0	0	55	0
Turn Type	Prot		Perm	Prot		Perm	Split				Split	
Protected Phases	1	6		5	2		3	3			4	4
Permitted Phases			6			2						
Actuated Green, G (s)	3.1	26.9	26.9	5.7	29.5	29.5		21.0			21.0	
Effective Green, g (s)	2.1	27.1	27.1	4.7	29.7	29.7		21.6			20.6	
Actuated g/C Ratio	0.02	0.30	0.30	0.05	0.33	0.33		0.24			0.23	
Clearance Time (s)	3.0	4.2	4.2	3.0	4.2	4.2		4.6			3.6	
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0		3.0			3.0	
Lane Grp Cap (vph)	37	954	427	83	1045	468		359			352	
v/s Ratio Prot	0.01	0.19		c0.04	c0.47			c0.04			c0.04	
v/s Ratio Perm			0.00			0.02						
v/c Ratio	0.49	0.62	0.01	0.71	1.42	0.07		0.16			0.16	
Uniform Delay, d1	43.4	27.1	22.0	42.0	30.1	20.7		27.0			27.7	
Progression Factor	0.81	1.32	1.77	0.64	0.97	0.94		1.00			1.00	
Incremental Delay, d2	5.0	1.6	0.0	9.4	190.6	0.1		0.9			0.9	
Delay (s)	40.4	37.3	39.0	36.2	219.7	19.6		28.0			28.7	
Level of Service	D	D	D	D	F	B		C			C	
Approach Delay (s)		37.4			204.4			28.0			28.7	
Approach LOS		D			F			C			C	

Intersection Summary

HCM Average Control Delay	146.7	HCM Level of Service	F
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 121: Santa Monica Ave & Orange Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑		↙	↑↑			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.93			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1583	3157		1571	3153			1525			1508	
Flt Permitted	0.08	1.00		0.17	1.00			0.93			0.96	
Satd. Flow (perm)	136	3157		284	3153			1429			1453	
Volume (vph)	33	1179	15	57	1598	32	13	26	39	25	62	119
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	36	1296	16	63	1756	35	14	29	43	27	68	131
RTOR Reduction (vph)	0	1	0	0	1	0	0	35	0	0	22	0
Lane Group Flow (vph)	36	1311	0	63	1790	0	0	51	0	0	204	0
Conf. Peds. (#/hr)	18		27	27		18	4		5	5		4
Conf. Bikes (#/hr)			5			7			1			2
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	64.2	64.2		64.2	64.2			16.7			16.7	
Effective Green, g (s)	64.7	64.7		64.7	64.7			17.3			17.3	
Actuated g/C Ratio	0.72	0.72		0.72	0.72			0.19			0.19	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.6			4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	98	2270		204	2267			275			279	
v/s Ratio Prot		0.42			c0.57							
v/s Ratio Perm	0.27			0.22				0.04			c0.14	
v/c Ratio	0.37	0.58		0.31	0.79			0.19			0.73	
Uniform Delay, d1	4.8	6.1		4.6	8.2			30.5			34.2	
Progression Factor	1.00	1.00		0.32	0.76			1.00			1.00	
Incremental Delay, d2	10.3	1.1		0.4	0.3			0.3			9.5	
Delay (s)	15.1	7.2		1.8	6.5			30.8			43.7	
Level of Service	B	A		A	A			C			D	
Approach Delay (s)		7.4			6.3			30.8			43.7	
Approach LOS		A			A			C			D	

Intersection Summary

HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷		↶	↶↷		↶	↶↷	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	1.00		1.00	0.98		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2837		1490	2971		1490	2925		1490	2832	
Flt Permitted	0.17	1.00		0.18	1.00		0.10	1.00		0.13	1.00	
Satd. Flow (perm)	261	2837		280	2971		153	2925		200	2832	
Volume (vph)	503	455	215	388	971	20	117	950	135	27	1032	511
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	524	474	224	404	1011	21	122	990	141	28	1075	532
RTOR Reduction (vph)	0	38	0	0	1	0	0	13	0	0	68	0
Lane Group Flow (vph)	524	660	0	404	1031	0	122	1118	0	28	1539	0
Turn Type	pm+pt			pm+pt			Perm			Perm		
Protected Phases	7	4		3	8			2			2	
Permitted Phases	4			8			2			2		
Actuated Green, G (s)	37.0	23.0		37.0	23.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)	37.0	24.0		37.0	24.0		41.0	41.0		41.0	41.0	
Actuated g/C Ratio	0.41	0.27		0.41	0.27		0.46	0.46		0.46	0.46	
Clearance Time (s)	3.0	5.0		3.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	5.1		3.0	4.1		5.7	5.7		5.7	5.7	
Lane Grp Cap (vph)	285	757		290	792		70	1333		91	1290	
v/s Ratio Prot	c0.27	0.23		0.20	0.35			0.38			0.54	
v/s Ratio Perm	c0.49			0.37			c0.80			0.14		
v/c Ratio	1.84	0.87		1.39	1.30		1.74	0.84		0.31	1.19	
Uniform Delay, d1	40.7	31.5		21.8	33.0		24.5	21.6		15.5	24.5	
Progression Factor	1.00	1.00		2.18	1.15		1.58	1.56		1.00	1.00	
Incremental Delay, d2	390.7	13.2		178.9	136.4		339.6	0.6		8.6	94.9	
Delay (s)	431.5	44.7		226.3	174.4		378.3	34.4		24.1	119.4	
Level of Service	F	D		F	F		F	C		C	F	
Approach Delay (s)		210.5			189.0			67.9			117.8	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	145.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	140.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.91	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1490	4225		1490	4244		1490	2980	1333	1490	4233	
Flt Permitted	0.15	1.00		0.14	1.00		0.16	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	231	4225		216	4244		257	2980	1333	1490	4233	
Volume (vph)	104	1257	124	320	1724	110	101	1010	178	156	1414	118
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	113	1366	135	348	1874	120	110	1098	193	170	1537	128
RTOR Reduction (vph)	0	13	0	0	7	0	0	0	33	0	11	0
Lane Group Flow (vph)	113	1488	0	348	1987	0	110	1098	160	170	1654	0
Turn Type	pm+pt			pm+pt			Perm		pm+ov	Prot		
Protected Phases	3	8		7	4		2		7	1	6	
Permitted Phases	8			4			2		2			
Actuated Green, G (s)	34.0	26.0		40.0	29.0		24.4	24.4	35.4	10.0	23.0	
Effective Green, g (s)	36.4	27.2		40.0	29.0		24.4	24.4	35.4	11.4	24.4	
Actuated g/C Ratio	0.40	0.30		0.44	0.32		0.27	0.27	0.39	0.13	0.27	
Clearance Time (s)	5.2	5.2		4.0	4.0		4.0	4.0	4.0	5.4	5.4	
Vehicle Extension (s)	3.0	3.0		3.5	3.0		3.0	3.0	3.5	3.0	3.0	
Lane Grp Cap (vph)	222	1277		252	1368		70	808	584	189	1148	
v/s Ratio Prot	0.05	0.35		c0.17	c0.47			0.37	0.03	c0.11	0.39	
v/s Ratio Perm	0.15			0.44			c0.43		0.09			
v/c Ratio	0.51	1.17		1.38	1.45		1.57	1.36	0.27	0.90	1.44	
Uniform Delay, d1	39.2	31.4		23.7	30.5		32.8	32.8	18.6	38.7	32.8	
Progression Factor	1.31	1.25		1.00	1.00		0.72	0.72	1.00	0.88	1.10	
Incremental Delay, d2	1.6	82.2		194.3	207.6		292.2	166.1	0.2	5.6	198.8	
Delay (s)	52.9	121.5		217.9	238.1		315.8	189.8	18.7	39.7	235.1	
Level of Service	D	F		F	F		F	F	B	D	F	
Approach Delay (s)	116.7			235.1			176.1		217.0			
Approach LOS	F			F			F		F			
Intersection Summary												
HCM Average Control Delay	192.4			HCM Level of Service		F						
HCM Volume to Capacity ratio	1.43											
Actuated Cycle Length (s)	90.0			Sum of lost time (s)		16.0						
Intersection Capacity Utilization	109.9%			ICU Level of Service		H						
Analysis Period (min)	15											
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕↕↕		↔	↕↕↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.91		1.00	0.91	
Fr _t	1.00	0.98		1.00	1.00		1.00	1.00		1.00	0.98	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	2943		1509	1587		1509	4315		1509	4263	
Fl _t Permitted	0.21	1.00		0.29	1.00		0.22	1.00		0.22	1.00	
Satd. Flow (perm)	334	2943		468	1587		353	4315		353	4263	
Volume (vph)	125	614	121	91	1448	10	89	1262	41	55	1677	213
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	130	640	126	95	1508	10	93	1315	43	57	1747	222
RTOR Reduction (vph)	0	1	0	0	1	0	0	8	0	0	5	0
Lane Group Flow (vph)	130	765	0	95	1517	0	93	1350	0	57	1964	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		4		4		2		2		2	
Permitted Phases	4		4		4		2		2		2	
Actuated Green, G (s)	19.0	19.0		19.0	19.0		18.0	18.0		18.0	18.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		18.0	18.0		18.0	18.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.40	0.40		0.40	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	141	1243		198	670		141	1726		141	1705	
v/s Ratio Prot		0.26			c0.96			0.31			c0.46	
v/s Ratio Perm	0.39			0.20			0.26			0.16		
v/c Ratio	0.92	0.62		0.48	2.26		0.66	0.78		0.40	1.15	
Uniform Delay, d ₁	12.3	10.1		9.4	13.0		11.0	11.8		9.7	13.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.36	1.65	
Incremental Delay, d ₂	52.6	0.9		1.8	573.9		21.7	3.6		0.8	69.1	
Delay (s)	64.9	11.1		11.2	586.9		32.7	15.4		13.9	91.4	
Level of Service	E	B		B	F		C	B		B	F	
Approach Delay (s)		18.9			553.0			16.5			89.3	
Approach LOS		B			F			B			F	

Intersection Summary

HCM Average Control Delay	186.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.72		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	160.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘		↗	↗↘↙		↗	↗↘↙	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	2969		1509	2978		1509	4204		1509	4155	
Flt Permitted	0.09	1.00		0.13	1.00		0.15	1.00		0.15	1.00	
Satd. Flow (perm)	147	2969		209	2978		235	4204		235	4155	
Volume (vph)	129	931	66	268	1415	67	57	1231	208	72	1545	187
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	134	970	69	279	1474	70	59	1282	217	75	1609	195
RTOR Reduction (vph)	0	5	0	0	3	0	0	23	0	0	15	0
Lane Group Flow (vph)	134	1034	0	279	1541	0	59	1476	0	75	1789	0
Conf. Peds. (#/hr)	87		57	57		87	153		33	33		153
Conf. Bikes (#/hr)			5			11			2			7
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	49.3	43.3		57.3	48.3		31.7	27.0		31.7	27.0	
Effective Green, g (s)	48.3	43.3		57.3	48.3		30.7	27.0		30.7	27.0	
Actuated g/C Ratio	0.48	0.43		0.57	0.48		0.31	0.27		0.31	0.27	
Clearance Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	1.0	0.2		1.0	0.2		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	139	1286		250	1438		119	1135		119	1122	
v/s Ratio Prot	0.05	0.35		c0.11	0.52		0.02	0.35		c0.02	c0.43	
v/s Ratio Perm	0.42			c0.53			0.13			0.17		
v/c Ratio	0.96	0.80		1.12	1.07		0.50	1.30		0.63	1.59	
Uniform Delay, d1	21.9	24.7		21.7	25.9		28.6	36.5		28.9	36.5	
Progression Factor	1.58	1.22		1.00	1.00		1.36	1.34		1.00	1.00	
Incremental Delay, d2	60.2	4.8		91.7	45.5		0.7	139.0		7.7	271.6	
Delay (s)	94.9	34.9		113.4	71.3		39.6	187.8		36.6	308.1	
Level of Service	F	C		F	E		D	F		D	F	
Approach Delay (s)		41.7			77.8			182.2			297.3	
Approach LOS		D			E			F			F	

Intersection Summary

HCM Average Control Delay	160.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	115.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗		↖	↗	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.98			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.88			0.98		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1498	1380			1511		1509	2997		1509	3000	
Flt Permitted	0.61	1.00			0.86		0.06	1.00		0.09	1.00	
Satd. Flow (perm)	967	1380			1330		95	2997		151	3000	
Volume (vph)	16	12	41	52	56	20	97	1528	53	12	1785	56
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	17	13	43	55	59	21	102	1608	56	13	1879	59
RTOR Reduction (vph)	0	34	0	0	8	0	0	2	0	0	2	0
Lane Group Flow (vph)	17	22	0	0	127	0	102	1662	0	13	1936	0
Conf. Peds. (#/hr)	7		8	8		7	11		15	15		11
Conf. Bikes (#/hr)						1			2			1
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	20.4	20.4			20.4		71.6	67.4		63.8	62.6	
Effective Green, g (s)	20.4	20.4			20.4		71.6	67.4		62.8	62.6	
Actuated g/C Ratio	0.20	0.20			0.20		0.72	0.67		0.63	0.63	
Clearance Time (s)	4.0	4.0			4.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	5.0	5.0			5.0		1.0	0.2		1.0	0.2	
Lane Grp Cap (vph)	197	282			271		139	2020		98	1878	
v/s Ratio Prot		0.02					c0.04	0.55		0.00	c0.65	
v/s Ratio Perm	0.02				c0.10		0.49			0.08		
v/c Ratio	0.09	0.08			0.47		0.73	0.82		0.13	1.03	
Uniform Delay, d1	32.2	32.2			35.0		22.3	11.9		12.9	18.7	
Progression Factor	1.00	1.00			1.00		1.00	1.00		0.51	1.36	
Incremental Delay, d2	0.4	0.2			2.7		15.8	3.9		0.0	16.4	
Delay (s)	32.6	32.4			37.7		38.1	15.9		6.6	41.8	
Level of Service	C	C			D		D	B		A	D	
Approach Delay (s)		32.5			37.7			17.2			41.6	
Approach LOS		C			D			B			D	

Intersection Summary

HCM Average Control Delay	30.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑↑↑		↕	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.95			0.98		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1485			1523		1490	4255		1490	4269	
Flt Permitted		0.92			0.88		0.08	1.00		0.08	1.00	
Satd. Flow (perm)		1378			1354		120	4255		123	4269	
Volume (vph)	26	115	77	81	276	62	37	1682	75	31	1952	42
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	27	117	79	83	282	63	38	1716	77	32	1992	43
RTOR Reduction (vph)	0	6	0	0	7	0	0	5	0	0	3	0
Lane Group Flow (vph)	0	217	0	0	421	0	38	1788	0	32	2032	0
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		28.8			28.8		51.8	51.8		51.8	51.8	
Effective Green, g (s)		29.8			29.8		52.2	52.2		52.2	52.2	
Actuated g/C Ratio		0.33			0.33		0.58	0.58		0.58	0.58	
Clearance Time (s)		5.0			5.0		4.4	4.4		4.4	4.4	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		456			448		70	2468		71	2476	
v/s Ratio Prot								0.42			c0.48	
v/s Ratio Perm		0.16			c0.31		0.32			0.26		
v/c Ratio		0.48			0.94		0.54	0.72		0.45	0.82	
Uniform Delay, d1		23.9			29.2		11.6	13.7		10.7	15.2	
Progression Factor		1.00			1.00		1.93	2.08		1.00	1.00	
Incremental Delay, d2		0.8			27.4		2.7	0.2		19.3	3.2	
Delay (s)		24.7			56.7		25.0	28.6		30.0	18.4	
Level of Service		C			E		C	C		C	B	
Approach Delay (s)		24.7			56.7			28.5			18.5	
Approach LOS		C			E			C			B	

Intersection Summary

HCM Average Control Delay	26.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕		↔	↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2949		1490	2962		1490	4229		1490	4244	
Flt Permitted	0.13	1.00		0.12	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	209	2949		185	2962		161	4229		161	4244	
Volume (vph)	111	892	68	291	1324	57	117	1642	149	40	1897	119
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	118	949	72	310	1409	61	124	1747	159	43	2018	127
RTOR Reduction (vph)	0	6	0	0	2	0	0	12	0	0	8	0
Lane Group Flow (vph)	118	1015	0	310	1468	0	124	1894	0	43	2137	0
Turn Type	Perm		pm+pt			Perm			Perm			
Protected Phases	8		7			4			6			
Permitted Phases	8		4			6			2			
Actuated Green, G (s)	28.6	28.6		41.6	41.6		37.6	37.6		37.6	37.6	
Effective Green, g (s)	30.0	30.0		43.0	43.0		39.0	39.0		39.0	39.0	
Actuated g/C Ratio	0.33	0.33		0.48	0.48		0.43	0.43		0.43	0.43	
Clearance Time (s)	5.4	5.4		3.5	5.4		5.4	5.4		5.4	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	70	983		219	1415		70	1833		70	1839	
v/s Ratio Prot		0.34		c0.14	0.50			0.45			0.50	
v/s Ratio Perm	c0.56			0.54			c0.77			0.27		
v/c Ratio	1.69	1.03		1.42	1.04		1.77	1.03		0.61	1.16	
Uniform Delay, d1	30.0	30.0		22.8	23.5		25.5	25.5		19.7	25.5	
Progression Factor	0.77	0.76		1.00	1.00		0.23	0.21		1.02	0.87	
Incremental Delay, d2	355.2	35.2		211.7	34.2		352.4	17.4		20.9	76.8	
Delay (s)	378.4	58.1		234.5	57.7		358.2	22.8		40.9	99.0	
Level of Service	F	E		F	E		F	C		D	F	
Approach Delay (s)		91.3			88.5			43.3			97.9	
Approach LOS		F			F			D			F	

Intersection Summary

HCM Average Control Delay	79.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	122.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑		↙	↑↑			↑	↗		↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frbp, ped/bikes	1.00	0.99		1.00	1.00			1.00	0.96		0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			0.99	1.00		0.99	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.99	
Satd. Flow (prot)	1497	2977		1506	3009			1523	1293		1438	
Flt Permitted	0.12	1.00		0.21	1.00			0.65	1.00		0.90	
Satd. Flow (perm)	184	2977		334	3009			1020	1293		1311	
Volume (vph)	25	1007	54	72	1621	15	38	14	30	46	43	75
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	26	1038	56	74	1671	15	39	14	31	47	44	77
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	26	0	19	0
Lane Group Flow (vph)	26	1092	0	74	1686	0	0	53	5	0	149	0
Conf. Peds. (#/hr)	45		31	31		45	9		19	19		9
Conf. Bikes (#/hr)			4			12			2			4
Turn Type	Perm			pm+pt			Perm		Perm	Perm		
Protected Phases		2		1	6			8				4
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	69.7	69.7		76.1	76.1			15.9	15.9			15.9
Effective Green, g (s)	69.7	69.7		76.1	76.1			15.9	15.9			15.9
Actuated g/C Ratio	0.70	0.70		0.76	0.76			0.16	0.16			0.16
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	0.2	0.2		1.0	0.2			4.0	4.0			3.0
Lane Grp Cap (vph)	128	2075		282	2290			162	206			208
v/s Ratio Prot		0.37		0.01	c0.56							
v/s Ratio Perm	0.14			0.19				0.05	0.00			c0.11
v/c Ratio	0.20	0.53		0.26	0.74			0.33	0.02			0.72
Uniform Delay, d1	5.3	7.2		4.2	6.5			37.3	35.5			39.9
Progression Factor	2.10	1.80		0.60	0.64			1.00	1.00			1.00
Incremental Delay, d2	3.4	0.9		0.0	0.2			1.6	0.1			11.3
Delay (s)	14.7	14.0		2.6	4.4			38.9	35.6			51.2
Level of Service	B	B		A	A			D	D			D
Approach Delay (s)		14.0			4.3			37.7				51.2
Approach LOS		B			A			D				D

Intersection Summary

HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↗↘		↙↘	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	0.99		0.89	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1509	3018	3002		1401	
Flt Permitted	0.13	1.00	1.00		0.99	
Satd. Flow (perm)	207	3018	3002		1401	
Volume (vph)	27	873	1489	54	38	159
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	27	882	1504	55	38	161
RTOR Reduction (vph)	0	0	2	0	54	0
Lane Group Flow (vph)	27	882	1557	0	145	0
Turn Type	Perm					
Protected Phases		2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	77.1	77.1	77.1		14.9	
Effective Green, g (s)	76.6	76.6	76.6		15.4	
Actuated g/C Ratio	0.77	0.77	0.77		0.15	
Clearance Time (s)	3.5	3.5	3.5		4.5	
Vehicle Extension (s)	0.2	0.2	0.2		3.0	
Lane Grp Cap (vph)	159	2312	2300		216	
v/s Ratio Prot		0.29	c0.52		c0.10	
v/s Ratio Perm	0.13					
v/c Ratio	0.17	0.38	0.68		0.67	
Uniform Delay, d1	3.1	3.9	5.7		39.9	
Progression Factor	0.35	0.28	0.24		1.00	
Incremental Delay, d2	2.2	0.5	1.1		7.9	
Delay (s)	3.3	1.5	2.5		47.8	
Level of Service	A	A	A		D	
Approach Delay (s)		1.6	2.5		47.8	
Approach LOS		A	A		D	
Intersection Summary						
HCM Average Control Delay			5.5		HCM Level of Service	A
HCM Volume to Capacity ratio			0.68			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			70.9%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕	↖	↖	↕↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4469		1583	4535		1583	3167	1417	1583	3167	1417
Flt Permitted	0.10	1.00		0.21	1.00		0.13	1.00	1.00	0.20	1.00	1.00
Satd. Flow (perm)	171	4469		356	4535		215	3167	1417	334	3167	1417
Volume (vph)	216	778	104	247	1580	35	102	697	132	188	1099	360
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	243	874	117	278	1775	39	115	783	148	211	1235	404
RTOR Reduction (vph)	0	19	0	0	2	0	0	0	42	0	0	139
Lane Group Flow (vph)	243	972	0	278	1812	0	115	783	106	211	1235	265
Turn Type	pm+pt			pm+pt			Perm		pm+ov	Perm		Perm
Protected Phases	1	6		5	2			8	5		4	
Permitted Phases	6			2			8		8	4		4
Actuated Green, G (s)	47.0	38.0		47.0	38.0		29.1	29.1	38.1	29.1	29.1	29.1
Effective Green, g (s)	47.0	39.0		47.0	39.0		31.0	31.0	39.0	31.0	31.0	31.0
Actuated g/C Ratio	0.52	0.43		0.52	0.43		0.34	0.34	0.43	0.34	0.34	0.34
Clearance Time (s)	3.0	5.0		3.0	5.0		5.9	5.9	3.0	5.9	5.9	5.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	215	1937		295	1965		74	1091	677	115	1091	488
v/s Ratio Prot	c0.10	0.22		0.08	0.40			0.25	0.01		0.39	
v/s Ratio Perm	c0.49			0.41			0.53		0.06	c0.63		0.19
v/c Ratio	1.13	0.50		0.94	0.92		1.55	0.72	0.16	1.83	1.13	0.54
Uniform Delay, d1	22.5	18.5		15.1	24.1		29.5	25.7	15.5	29.5	29.5	23.8
Progression Factor	1.00	1.00		2.82	1.43		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	100.8	0.9		6.5	0.9		305.1	4.1	0.1	407.4	71.2	4.3
Delay (s)	123.4	19.4		49.2	35.4		334.6	29.8	15.6	436.9	100.7	28.1
Level of Service	F	B		D	D		F	C	B	F	F	C
Approach Delay (s)		39.9			37.2			61.3			123.2	
Approach LOS		D			D			E			F	

Intersection Summary

HCM Average Control Delay	67.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		 			 			 			 		
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95		
Frt	1.00	0.99		1.00	1.00		1.00	0.98		1.00	0.97		
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1509	2982		1509	3004		1509	2962		1509	2941		
Flt Permitted	0.07	1.00		0.38	1.00		0.11	1.00		0.14	1.00		
Satd. Flow (perm)	113	2982		596	3004		176	2962		219	2941		
Volume (vph)	155	530	45	186	1430	45	78	757	107	63	1171	237	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	167	570	48	200	1538	48	84	814	115	68	1259	255	
RTOR Reduction (vph)	0	4	0	0	2	0	0	11	0	0	17	0	
Lane Group Flow (vph)	167	614	0	200	1584	0	84	918	0	68	1497	0	
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm		
Protected Phases	6		2		2		4		8				
Permitted Phases	6		2		4		8						
Actuated Green, G (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0		
Effective Green, g (s)	56.0	56.0		56.0	56.0		36.0	36.0		36.0	36.0		
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.36	0.36		0.36	0.36		
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0		
Vehicle Extension (s)	4.9	4.9		4.9	4.9		4.9	4.9		4.9	4.9		
Lane Grp Cap (vph)	63	1670		334	1682		63	1066		79	1059		
v/s Ratio Prot		0.21			0.53			0.31			c0.51		
v/s Ratio Perm	c1.47			0.34			0.48			0.31			
v/c Ratio	2.65	0.37		0.60	0.94		1.33	0.86		0.86	1.41		
Uniform Delay, d1	22.0	12.2		14.6	20.5		32.0	29.7		29.7	32.0		
Progression Factor	1.00	1.00		1.00	1.00		1.21	1.23		1.00	1.00		
Incremental Delay, d2	786.2	0.6		7.7	11.9		222.6	8.7		67.7	191.9		
Delay (s)	808.2	12.8		22.3	32.4		261.3	45.0		97.4	223.9		
Level of Service	F	B		C	C		F	D		F	F		
Approach Delay (s)		182.0			31.2			63.0			218.5		
Approach LOS		F			C			E			F		
Intersection Summary													
HCM Average Control Delay			117.7			HCM Level of Service				F			
HCM Volume to Capacity ratio			2.16										
Actuated Cycle Length (s)			100.0			Sum of lost time (s)				8.0			
Intersection Capacity Utilization			126.6%			ICU Level of Service				H			
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 133: Norton Ave & Fairfax Ave



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frbp, ped/bikes	0.97		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.89		1.00	1.00	1.00	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1366		1509	3018	2994	
Flt Permitted	0.99		0.13	1.00	1.00	
Satd. Flow (perm)	1366		199	3018	2994	
Volume (vph)	33	136	95	864	1425	41
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	33	137	96	873	1439	41
RTOR Reduction (vph)	44	0	0	0	2	0
Lane Group Flow (vph)	126	0	96	873	1478	0
Conf. Peds. (#/hr)			32			32
Conf. Bikes (#/hr)		21				3
Turn Type			Perm			
Protected Phases	4			2	2	
Permitted Phases			2			
Actuated Green, G (s)	23.4		69.0	69.0	69.0	
Effective Green, g (s)	23.4		68.6	68.6	68.6	
Actuated g/C Ratio	0.23		0.69	0.69	0.69	
Clearance Time (s)	4.0		3.6	3.6	3.6	
Vehicle Extension (s)	3.0		0.2	0.2	0.2	
Lane Grp Cap (vph)	320		137	2070	2054	
v/s Ratio Prot	c0.09			0.29	c0.49	
v/s Ratio Perm			0.48			
v/c Ratio	0.39		0.70	0.42	0.72	
Uniform Delay, d1	32.3		9.5	6.9	9.7	
Progression Factor	1.00		1.12	0.09	0.45	
Incremental Delay, d2	3.6		10.9	0.2	0.2	
Delay (s)	35.9		21.6	0.9	4.6	
Level of Service	D		C	A	A	
Approach Delay (s)	35.9			2.9	4.6	
Approach LOS	D			A	A	
Intersection Summary						
HCM Average Control Delay			6.0		HCM Level of Service	A
HCM Volume to Capacity ratio			0.64			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			78.1%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↗	↕		↗	↕	↗		↕	↗
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00		0.91	0.91
Frbp, ped/bikes	1.00	0.97		1.00	0.99		1.00	1.00	0.78		1.00	0.82
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1509	2847		1509	2978		1509	3018	1056		2875	1004
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.63	1.00
Satd. Flow (perm)	1509	2847		1509	2978		1509	3018	1056		1830	1004
Volume (vph)	31	748	187	238	1364	56	97	943	90	75	1102	287
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	32	779	195	248	1421	58	101	982	94	78	1148	299
RTOR Reduction (vph)	0	3	0	0	2	0	0	0	61	0	0	108
Lane Group Flow (vph)	32	971	0	248	1477	0	101	982	33	0	1226	191
Conf. Peds. (#/hr)	148		120	120		148	115		139	139		116
Conf. Bikes (#/hr)			6			2			3			
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases								8				4
Actuated Green, G (s)	3.8	47.0		7.0	50.2		7.0	35.0	35.0		25.0	25.0
Effective Green, g (s)	2.8	47.0		6.0	50.2		6.0	35.0	35.0		25.0	25.0
Actuated g/C Ratio	0.03	0.47		0.06	0.50		0.06	0.35	0.35		0.25	0.25
Clearance Time (s)	3.0	4.0		3.0	4.0		3.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	1.0	0.2		1.0	0.2		1.0	5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	42	1338		91	1495		91	1056	370		458	251
v/s Ratio Prot	0.02	0.34		c0.16	c0.50		0.07	c0.33				
v/s Ratio Perm									0.03		c0.67	0.19
v/c Ratio	0.76	0.73		2.73	0.99		1.11	0.93	0.09		2.68	0.76
Uniform Delay, d1	48.3	21.3		47.0	24.6		47.0	31.3	21.8		37.5	34.7
Progression Factor	0.61	2.03		1.03	0.86		1.00	1.00	1.00		0.68	0.56
Incremental Delay, d2	39.8	2.5		798.7	17.2		127.1	15.2	0.5		759.0	14.2
Delay (s)	69.5	45.8		847.0	38.4		174.1	46.6	22.3		784.4	33.7
Level of Service	E	D		F	D		F	D	C		F	C
Approach Delay (s)		46.5			154.5			55.6			637.2	
Approach LOS		D			F			E			F	

Intersection Summary			
HCM Average Control Delay	248.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	136.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕↕↕		↗	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.98			0.98		1.00	1.00		1.00	0.99	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1596			1616		1583	4542		1583	4506	
Flt Permitted		0.59			0.82		0.10	1.00		0.23	1.00	
Satd. Flow (perm)		963			1344		169	4542		383	4506	
Volume (vph)	123	97	37	99	214	46	64	1014	12	33	1496	104
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	127	100	38	102	221	47	66	1045	12	34	1542	107
RTOR Reduction (vph)	0	5	0	0	8	0	0	1	0	0	6	0
Lane Group Flow (vph)	0	260	0	0	362	0	66	1056	0	34	1643	0
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases	8		4		4		6		6		2	
Permitted Phases	8		4		4		6		6		2	
Actuated Green, G (s)	26.9		26.9		26.9		53.3		53.3		53.3	
Effective Green, g (s)	28.3		28.3		28.3		53.7		53.7		53.7	
Actuated g/C Ratio	0.31		0.31		0.31		0.60		0.60		0.60	
Clearance Time (s)	5.4		5.4		5.4		4.4		4.4		4.4	
Vehicle Extension (s)	3.0		3.0		3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)	303		423		423		101		2710		229	
v/s Ratio Prot							0.23				0.36	
v/s Ratio Perm	0.27		c0.27		c0.27		c0.39		c0.39		0.09	
v/c Ratio	0.86		0.86		0.86		0.65		0.39		0.15	
Uniform Delay, d1	28.9		28.9		28.9		12.0		9.5		8.0	
Progression Factor	1.00		1.00		1.00		1.33		0.78		1.00	
Incremental Delay, d2	20.5		15.6		15.6		19.8		0.3		1.4	
Delay (s)	49.4		44.5		44.5		35.8		7.8		9.4	
Level of Service	D		D		D		D		A		A	
Approach Delay (s)	49.4		44.5		44.5		9.4		9.4		12.5	
Approach LOS	D		D		D		A		A		B	

Intersection Summary

HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3117		1583	3141		1583	4486		1583	4458	
Flt Permitted	0.11	1.00		0.21	1.00		0.12	1.00		0.15	1.00	
Satd. Flow (perm)	180	3117		349	3141		208	4486		248	4458	
Volume (vph)	80	691	82	221	1418	82	59	957	99	89	1400	218
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	83	720	85	230	1477	85	61	997	103	93	1458	227
RTOR Reduction (vph)	0	10	0	0	4	0	0	14	0	0	19	0
Lane Group Flow (vph)	83	795	0	230	1558	0	61	1086	0	93	1666	0
Turn Type	Perm		pm+pt		Perm		Perm		Perm			
Protected Phases	8		7		4		6		6		2	
Permitted Phases	8		4		6		6		2			
Actuated Green, G (s)	35.7	35.7		48.7	48.7		31.1	31.1		31.1	31.1	
Effective Green, g (s)	37.0	37.0		50.0	50.0		32.0	32.0		32.0	32.0	
Actuated g/C Ratio	0.41	0.41		0.56	0.56		0.36	0.36		0.36	0.36	
Clearance Time (s)	5.3	5.3		3.5	5.3		4.9	4.9		4.9	4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	1281		317	1745		74	1595		88	1585	
v/s Ratio Prot		0.26		0.07	c0.50			0.24			0.37	
v/s Ratio Perm	c0.46			0.33			0.29			c0.37		
v/c Ratio	1.12	0.62		0.73	0.89		0.82	0.68		1.06	1.05	
Uniform Delay, d1	26.5	21.0		12.9	17.6		26.4	24.7		29.0	29.0	
Progression Factor	1.00	1.00		1.86	1.70		1.06	1.08		1.30	1.19	
Incremental Delay, d2	141.5	2.3		0.8	0.8		36.2	1.1		102.3	35.2	
Delay (s)	168.0	23.2		24.6	30.8		64.2	27.7		140.1	69.7	
Level of Service	F	C		C	C		E	C		F	E	
Approach Delay (s)		36.8			30.0			29.6			73.4	
Approach LOS		D			C			C			E	

Intersection Summary

HCM Average Control Delay	44.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	112.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗		↕		↖	↕	↗
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85		1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00		0.95	1.00	1.00
Satd. Flow (prot)	1509	2986		1509	3018	1350		3006		1509	3018	1350
Flt Permitted	0.08	1.00		0.19	1.00	1.00		0.65		0.24	1.00	1.00
Satd. Flow (perm)	132	2986		303	3018	1350		1971		384	3018	1350
Volume (vph)	142	892	66	111	1360	302	23	640	10	91	1224	206
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	146	920	68	114	1402	311	24	660	10	94	1262	212
RTOR Reduction (vph)	0	5	0	0	0	55	0	1	0	0	0	121
Lane Group Flow (vph)	146	983	0	114	1402	256	0	693	0	94	1262	91
Turn Type	pm+pt			pm+pt			Perm	Perm		Perm		Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	55.9	48.1		54.1	47.2	47.2		34.0		34.0	34.0	34.0
Effective Green, g (s)	54.9	48.1		53.1	47.2	47.2		34.0		34.0	34.0	34.0
Actuated g/C Ratio	0.55	0.48		0.53	0.47	0.47		0.34		0.34	0.34	0.34
Clearance Time (s)	3.0	4.0		3.0	4.0	4.0		4.0		4.0	4.0	4.0
Vehicle Extension (s)	1.0	3.0		1.0	3.0	3.0		3.5		3.5	3.5	3.5
Lane Grp Cap (vph)	166	1436		232	1424	637		670		131	1026	459
v/s Ratio Prot	c0.06	0.33		0.03	c0.46					c0.42		
v/s Ratio Perm	0.42			0.23		0.19		0.35		0.24		0.07
v/c Ratio	0.88	0.68		0.49	0.98	0.40		1.03		0.72	1.23	0.20
Uniform Delay, d1	22.0	20.1		13.6	26.0	17.2		33.0		28.8	33.0	23.3
Progression Factor	1.00	1.00		1.50	0.63	0.74		1.00		1.00	1.00	1.00
Incremental Delay, d2	36.3	2.7		0.2	10.5	0.6		43.8		28.5	112.2	1.0
Delay (s)	58.3	22.8		20.6	26.9	13.3		76.8		57.3	145.2	24.3
Level of Service	E	C		C	C	B		E		E	F	C
Approach Delay (s)		27.3			24.2			76.8			123.6	
Approach LOS		C			C			E			F	

Intersection Summary

HCM Average Control Delay	61.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	128.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1583	3158		1583	3151			1616			1609	
Flt Permitted	0.14	1.00		0.21	1.00			0.95			0.95	
Satd. Flow (perm)	228	3158		345	3151			1548			1531	
Volume (vph)	29	937	17	94	1468	50	11	86	23	62	308	98
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	30	966	18	97	1513	52	11	89	24	64	318	101
RTOR Reduction (vph)	0	2	0	0	4	0	0	15	0	0	4	0
Lane Group Flow (vph)	30	982	0	97	1561	0	0	109	0	0	479	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	6		2		2		8		8		4	
Permitted Phases	6		2		2		8		8		4	
Actuated Green, G (s)	28.9	28.9		28.9	28.9			21.9			21.9	
Effective Green, g (s)	29.2	29.2		29.2	29.2			22.8			22.8	
Actuated g/C Ratio	0.49	0.49		0.49	0.49			0.38			0.38	
Clearance Time (s)	4.3	4.3		4.3	4.3			4.9			4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	111	1537		168	1533			588			582	
v/s Ratio Prot		0.31			c0.50							
v/s Ratio Perm	0.13			0.28				0.07			c0.31	
v/c Ratio	0.27	0.64		0.58	1.02			0.19			0.82	
Uniform Delay, d1	9.1	11.5		11.0	15.4			12.4			16.8	
Progression Factor	0.79	0.71		1.00	1.00			1.00			1.00	
Incremental Delay, d2	5.4	1.9		13.7	27.7			0.2			9.2	
Delay (s)	12.6	10.0		24.7	43.1			12.6			26.0	
Level of Service	B	B		C	D			B			C	
Approach Delay (s)		10.1			42.1			12.6			26.0	
Approach LOS		B			D			B			C	

Intersection Summary

HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑		↑↓		↑	↑↓	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)		4.0			4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95	1.00		1.00		0.95	0.95	
Frt		1.00			1.00	0.85		0.96		1.00	0.98	
Flt Protected		1.00			1.00	1.00		0.98		0.95	0.97	
Satd. Flow (prot)		3014			3018	1350		1499		1433	1427	
Flt Permitted		1.00			1.00	1.00		0.98		0.95	0.97	
Satd. Flow (perm)		3014			3018	1350		1499		1433	1427	
Volume (vph)	0	726	7	0	1775	553	16	19	15	319	28	25
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	772	7	0	1888	588	17	20	16	339	30	27
RTOR Reduction (vph)	0	0	0	0	0	92	0	15	0	0	6	0
Lane Group Flow (vph)	0	779	0	0	1888	496	0	38	0	198	192	0
Turn Type					pm+ov		Split			Split		
Protected Phases		2			6	4	3	3		4	4	
Permitted Phases						6						
Actuated Green, G (s)		62.6			62.6	81.9		6.1		19.3	19.3	
Effective Green, g (s)		62.6			62.6	81.9		6.1		19.3	19.3	
Actuated g/C Ratio		0.63			0.63	0.82		0.06		0.19	0.19	
Clearance Time (s)		4.0			4.0	4.0		4.0		4.0	4.0	
Vehicle Extension (s)		4.5			4.5	4.0		3.0		4.0	4.0	
Lane Grp Cap (vph)		1887			1889	1160		91		277	275	
v/s Ratio Prot		0.26			c0.63	0.08		c0.03		c0.14	0.13	
v/s Ratio Perm						0.29						
v/c Ratio		0.41			1.00	0.43		0.42		0.71	0.70	
Uniform Delay, d1		9.4			18.7	2.5		45.2		37.8	37.6	
Progression Factor		1.36			1.00	1.00		1.00		1.46	1.48	
Incremental Delay, d2		0.2			20.6	0.3		3.1		8.3	7.5	
Delay (s)		13.0			39.3	2.9		48.3		63.4	63.1	
Level of Service		B			D	A		D		E	E	
Approach Delay (s)		13.0			30.6			48.3			63.3	
Approach LOS		B			C			D			E	

Intersection Summary

HCM Average Control Delay	30.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↗		↕	↗
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.98		1.00	1.00			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (prot)	1509	2960		1509	3003			1547	1350		1494	
Flt Permitted	0.10	1.00		0.16	1.00			0.97	1.00		0.99	
Satd. Flow (perm)	162	2960		257	3003			1547	1350		1494	
Volume (vph)	64	736	108	429	1796	59	113	99	592	10	17	15
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	67	775	114	452	1891	62	119	104	623	11	18	16
RTOR Reduction (vph)	0	10	0	0	2	0	0	0	426	0	14	0
Lane Group Flow (vph)	67	879	0	452	1951	0	0	223	197	0	31	0
Turn Type	Perm		pm+pt			Split		pm+ov		Split		
Protected Phases	6		5 7			4		4 5 7		8 8		
Permitted Phases	6		2					4				
Actuated Green, G (s)	39.2	39.2		47.2	45.2			16.0	21.0		14.0	
Effective Green, g (s)	39.2	39.2		47.2	45.2			16.0	20.0		14.0	
Actuated g/C Ratio	0.39	0.39		0.47	0.45			0.16	0.20		0.14	
Clearance Time (s)	4.0	4.0			4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0			3.0			4.0			3.0	
Lane Grp Cap (vph)	64	1160		171	1357			248	270		209	
v/s Ratio Prot		0.30		c0.11	0.65			c0.14	0.03		c0.02	
v/s Ratio Perm	0.41			c1.14					0.12			
v/c Ratio	1.05	0.76		2.64	1.44			0.90	0.73		0.15	
Uniform Delay, d1	30.4	26.3		27.0	27.4			41.2	37.5		37.8	
Progression Factor	1.00	1.00		1.00	1.00			1.41	6.31		1.00	
Incremental Delay, d2	126.1	4.7		756.0	201.2			20.0	4.6		1.5	
Delay (s)	156.5	31.0		783.0	228.6			77.9	240.9		39.3	
Level of Service	F	C		F	F			E	F		D	
Approach Delay (s)		39.8			332.8			197.9			39.3	
Approach LOS		D			F			F			D	

Intersection Summary

HCM Average Control Delay	237.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.8
Intersection Capacity Utilization	115.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗	↖	↔			↕	↗		↕	↘
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)			4.0	4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor			1.00	0.95	0.95			0.95	1.00		0.95	
Frbp, ped/bikes			1.00	1.00	0.99			1.00	1.00		1.00	
Flpb, ped/bikes			1.00	1.00	1.00			1.00	1.00		1.00	
Frt			0.86	1.00	0.97			1.00	0.85		1.00	
Flt Protected			1.00	0.95	0.96			1.00	1.00		1.00	
Satd. Flow (prot)			1374	1433	1396			3016	1350		3012	
Flt Permitted			1.00	0.95	0.96			0.95	1.00		1.00	
Satd. Flow (perm)			1374	1433	1396			2872	1350		3012	
Volume (vph)	0	0	10	1746	9	169	5	767	531	0	555	4
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	10	1782	9	172	5	783	542	0	566	4
RTOR Reduction (vph)	0	0	4	0	8	0	0	0	347	0	1	0
Lane Group Flow (vph)	0	0	6	1051	904	0	0	788	195	0	569	0
Confl. Peds. (#/hr)	22						22	22				22
Confl. Bikes (#/hr)							2					1
Turn Type			custom	Prot			Perm		Perm			
Protected Phases				4	8			2				2
Permitted Phases			4				2		2			
Actuated Green, G (s)			56.0	56.0	56.0			35.0	35.0			35.0
Effective Green, g (s)			56.0	56.0	56.0			36.0	36.0			36.0
Actuated g/C Ratio			0.56	0.56	0.56			0.36	0.36			0.36
Clearance Time (s)			4.0	4.0	4.0			5.0	5.0			5.0
Vehicle Extension (s)			7.0	7.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)			769	802	782			1034	486			1084
v/s Ratio Prot				c0.73	0.65							0.19
v/s Ratio Perm			0.00					c0.27	0.14			
v/c Ratio			0.01	1.31	1.16			0.76	0.40			0.53
Uniform Delay, d1			9.7	22.0	22.0			28.2	23.9			25.3
Progression Factor			1.00	1.00	1.00			0.72	2.39			1.42
Incremental Delay, d2			0.0	148.6	84.2			3.4	1.6			0.2
Delay (s)			9.7	170.6	106.2			23.6	58.9			35.9
Level of Service			A	F	F			C	E			D
Approach Delay (s)		9.7			140.7			38.0				35.9
Approach LOS		A			F			D				D
Intersection Summary												
HCM Average Control Delay			89.7									F
HCM Volume to Capacity ratio			1.10									
Actuated Cycle Length (s)			100.0									8.0
Intersection Capacity Utilization			99.7%									F
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↗		↖	↕		↖	↕	↗
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	0.94	1.00	0.98		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1509	1588	1268	1490	1466		1509	2986		1509	3018	1288
Flt Permitted	0.12	1.00	1.00	0.48	1.00		0.09	1.00		0.17	1.00	1.00
Satd. Flow (perm)	197	1588	1268	745	1466		142	2986		266	3018	1288
Volume (vph)	81	244	124	67	306	175	135	944	37	29	1658	620
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	87	262	133	72	329	188	145	1015	40	31	1783	667
RTOR Reduction (vph)	0	0	90	0	21	0	0	2	0	0	0	104
Lane Group Flow (vph)	87	262	43	72	496	0	145	1053	0	31	1783	563
Conf. Peds. (#/hr)	31		29	29		31	16		30	30		16
Conf. Bikes (#/hr)			2			4			2			1
Turn Type	pm+pt		Perm	pm+pt		pm+pt		pm+pt		pm+pt		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		4			8			8
Actuated Green, G (s)	38.4	31.7	31.7	36.5	31.0		50.8	45.0		43.6	40.8	40.8
Effective Green, g (s)	37.9	32.2	32.2	35.5	31.0		51.3	45.5		42.6	40.8	40.8
Actuated g/C Ratio	0.38	0.32	0.32	0.36	0.31		0.51	0.46		0.43	0.41	0.41
Clearance Time (s)	3.0	4.5	4.5	3.0	4.0		3.0	4.5		3.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	1.0	2.5		1.0	5.0		1.0	5.0	5.0
Lane Grp Cap (vph)	149	511	408	298	454		162	1359		136	1231	526
v/s Ratio Prot	c0.03	0.16		0.01	c0.34		c0.06	0.35		0.00	c0.59	
v/s Ratio Perm	0.19		0.03	0.07		0.40			0.09			0.44
v/c Ratio	0.58	0.51	0.10	0.24	1.09		0.90	0.77		0.23	1.45	1.07
Uniform Delay, d1	23.9	27.5	23.8	22.1	34.5		48.4	22.9		18.1	29.6	29.6
Progression Factor	1.00	1.00	1.00	0.97	0.98		2.06	1.52		0.86	0.80	0.72
Incremental Delay, d2	5.7	0.9	0.1	0.1	67.7		27.4	2.5		0.0	202.2	36.1
Delay (s)	29.7	28.4	23.9	21.6	101.7		127.1	37.3		15.6	225.9	57.4
Level of Service	C	C	C	C	F		F	D		B	F	E
Approach Delay (s)		27.4			91.9			48.1			178.0	
Approach LOS		C			F			D			F	

Intersection Summary

HCM Average Control Delay	119.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	113.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↕↔		↔↔	↕↔		↔↔	↕↔			↕↕	↕↔
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.95			0.95	1.00
Frbp, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99			1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	2977		2927	3016		2927	2931			3018	1290
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	2927	2977		2927	3016		2927	2931			3018	1290
Volume (vph)	299	793	41	431	1479	4	223	802	108	0	1431	540
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	318	844	44	459	1573	4	237	853	115	0	1522	574
RTOR Reduction (vph)	0	4	0	0	0	0	0	11	0	0	0	140
Lane Group Flow (vph)	318	885	0	459	1577	0	237	957	0	0	1522	434
Conf. Peds. (#/hr)	75		79	79		75	30		64	64		30
Conf. Bikes (#/hr)			8			23			2			3
Turn Type	Prot			Prot			Prot					Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases												4
Actuated Green, G (s)	9.0	29.5		9.0	29.5		9.0	48.0			34.0	34.0
Effective Green, g (s)	9.0	30.0		9.0	30.0		10.0	49.0			35.0	35.0
Actuated g/C Ratio	0.09	0.30		0.09	0.30		0.10	0.49			0.35	0.35
Clearance Time (s)	4.0	4.5		4.0	4.5		5.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0		1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	263	893		263	905		293	1436			1056	452
v/s Ratio Prot	0.11	0.30		c0.16	c0.52		c0.08	0.33			c0.50	
v/s Ratio Perm												0.34
v/c Ratio	1.21	0.99		1.75	1.74		0.81	0.67			1.44	0.96
Uniform Delay, d1	45.5	34.9		45.5	35.0		44.1	19.3			32.5	31.8
Progression Factor	0.82	1.13		1.27	0.94		1.00	1.00			0.71	0.95
Incremental Delay, d2	120.5	25.6		341.1	335.8		14.3	1.3			199.1	6.1
Delay (s)	157.9	64.9		399.1	368.9		58.3	20.6			222.2	36.4
Level of Service	F	E		F	F		E	C			F	D
Approach Delay (s)		89.4			375.7			28.0			171.3	
Approach LOS		F			F			C			F	

Intersection Summary			
HCM Average Control Delay	193.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	125.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕		↗	↕		↖	↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Fr _t	1.00	0.99		1.00	1.00		1.00	0.97		1.00	0.99	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	2993		1509	3008		1509	2927		1509	2978	
Fl _t Permitted	0.22	1.00		0.95	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	343	2993		1509	3008		159	2927		159	2978	
Volume (vph)	40	520	30	406	1018	21	60	997	250	83	1648	158
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	565	33	441	1107	23	65	1084	272	90	1791	172
RTOR Reduction (vph)	0	4	0	0	2	0	0	24	0	0	8	0
Lane Group Flow (vph)	43	594	0	441	1128	0	65	1332	0	90	1955	0
Turn Type	Perm		Prot		Perm		Perm		Perm			
Protected Phases	8		7		4		6		2			
Permitted Phases	8						6		2			
Actuated Green, G (s)	25.0	25.0		13.0	41.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	26.0	26.0		12.0	42.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio	0.29	0.29		0.13	0.47		0.44	0.44		0.44	0.44	
Clearance Time (s)	5.0	5.0		3.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	99	865		201	1404		71	1301		71	1324	
v/s Ratio Prot		0.20		c0.29	c0.38			0.45			c0.66	
v/s Ratio Perm	0.13						0.41			0.57		
v/c Ratio	0.43	0.69		2.19	0.80		0.92	1.02		1.27	1.48	
Uniform Delay, d ₁	26.0	28.4		39.0	20.5		23.4	25.0		25.0	25.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d ₂	13.3	4.4		553.3	5.0		84.9	31.1		194.7	218.7	
Delay (s)	39.3	32.8		592.3	25.5		108.4	56.1		219.7	243.7	
Level of Service	D	C		F	C		F	E		F	F	
Approach Delay (s)		33.2			184.6			58.5			242.6	
Approach LOS		C			F			E			F	

Intersection Summary

HCM Average Control Delay	157.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	125.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)					4.0			4.0		4.0	4.0	
Lane Util. Factor					1.00			0.95		1.00	0.95	
Frbp, ped/bikes					1.00			1.00		1.00	1.00	
Flpb, ped/bikes					1.00			1.00		1.00	1.00	
Frt					0.94			1.00		1.00	1.00	
Flt Protected					0.97			1.00		0.95	1.00	
Satd. Flow (prot)					1528			3147		1583	3167	
Flt Permitted					0.82			1.00		0.15	1.00	
Satd. Flow (perm)					1290			3147		252	3167	
Volume (vph)	0	0	0	136	0	99	0	1164	27	79	2062	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	145	0	105	0	1238	29	84	2194	0
RTOR Reduction (vph)	0	0	0	0	26	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	224	0	0	1265	0	84	2194	0
Confl. Peds. (#/hr)							10		32	32		10
Confl. Bikes (#/hr)			1						2			4
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)					30.5			61.0		61.0	61.0	
Effective Green, g (s)					31.0			61.0		61.0	61.0	
Actuated g/C Ratio					0.31			0.61		0.61	0.61	
Clearance Time (s)					4.5			4.0		4.0	4.0	
Vehicle Extension (s)					3.0			5.0		5.0	5.0	
Lane Grp Cap (vph)					400			1920		154	1932	
v/s Ratio Prot								0.40			c0.69	
v/s Ratio Perm					c0.17					0.33		
v/c Ratio					0.56			0.66		0.55	1.14	
Uniform Delay, d1					28.8			12.7		11.4	19.5	
Progression Factor					1.00			1.00		1.00	1.00	
Incremental Delay, d2					5.6			1.8		13.2	68.0	
Delay (s)					34.4			14.5		24.6	87.5	
Level of Service					C			B		C	F	
Approach Delay (s)		0.0			34.4			14.5			85.2	
Approach LOS		A			C			B			F	
Intersection Summary												
HCM Average Control Delay			58.3									HCM Level of Service E
HCM Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			100.0									Sum of lost time (s) 8.0
Intersection Capacity Utilization			95.2%									ICU Level of Service F
Analysis Period (min)			15									
c Critical Lane Group												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 			 			  	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00	1.00	0.91	
Frbp, ped/bikes	1.00	1.00	0.94	1.00	1.00		1.00	1.00	0.95	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3072	3167	1325	3072	3147		1583	3167	1352	1583	4426	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.09	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3072	3167	1325	3072	3147		155	3167	1352	171	4426	
Volume (vph)	82	594	64	354	1211	29	99	1134	319	20	1893	217
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	85	612	66	365	1248	30	102	1169	329	21	1952	224
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	87	0	12	0
Lane Group Flow (vph)	85	612	66	365	1277	0	102	1169	242	21	2164	0
Conf. Peds. (#/hr)	73		41	41		73	67		26	26		67
Conf. Bikes (#/hr)			3			4			1			4
Turn Type	Prot		pm+ov	Prot		pm+pt		pm+ov	pm+pt			
Protected Phases	5	2	3	1	6	3	8	1	7	4		
Permitted Phases			2			8		8	4			
Actuated Green, G (s)	6.4	48.8	55.8	8.0	50.4	48.5	41.7	49.7	40.3	37.5		
Effective Green, g (s)	6.4	50.1	57.1	8.0	51.7	49.9	43.1	51.1	41.7	38.9		
Actuated g/C Ratio	0.05	0.42	0.48	0.07	0.43	0.42	0.36	0.43	0.35	0.32		
Clearance Time (s)	4.0	5.3	4.0	4.0	5.3	4.0	5.4	4.0	4.0	5.4		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	164	1322	675	205	1356	148	1137	621	92	1435		
v/s Ratio Prot	0.03	c0.19	0.01	c0.12	c0.41	c0.04	0.37	0.03	0.01	c0.49		
v/s Ratio Perm			0.04			0.25		0.15	0.07			
v/c Ratio	0.52	0.46	0.10	1.78	0.94	0.69	1.03	0.39	0.23	1.51		
Uniform Delay, d1	55.3	25.2	17.3	56.0	32.7	56.9	38.5	23.7	30.2	40.5		
Progression Factor	0.79	0.50	0.50	0.94	1.26	1.23	1.28	2.39	1.00	1.00		
Incremental Delay, d2	2.4	1.0	0.1	356.1	4.5	5.4	24.8	0.2	1.3	232.2		
Delay (s)	46.3	13.7	8.7	408.6	45.8	75.3	74.0	56.7	31.5	272.8		
Level of Service	D	B	A	F	D	E	E	E	C	F		
Approach Delay (s)		16.9			126.4		70.5			270.5		
Approach LOS		B			F		E			F		
Intersection Summary												
HCM Average Control Delay			149.6			HCM Level of Service			F			
HCM Volume to Capacity ratio			1.13									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			109.0%			ICU Level of Service		G				
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗		↘	↗↗	↘	↘	↗↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3167	1417	1583	3099		1583	3167	1417	1583	3084	
Flt Permitted	0.07	1.00	1.00	0.33	1.00		0.13	1.00	1.00	0.27	1.00	
Satd. Flow (perm)	118	3167	1417	549	3099		217	3167	1417	444	3084	
Volume (vph)	64	613	251	217	1098	183	239	728	42	165	876	183
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	67	645	264	228	1156	193	252	766	44	174	922	193
RTOR Reduction (vph)	0	0	41	0	11	0	0	0	24	0	15	0
Lane Group Flow (vph)	67	645	223	228	1338	0	252	766	20	174	1100	0
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6		6	2			8		8		4	
Actuated Green, G (s)	54.6	54.6	54.6	54.6	54.6		54.0	54.0	54.0	54.0	54.0	
Effective Green, g (s)	56.5	56.5	56.5	56.5	56.5		55.5	55.5	55.5	55.5	55.5	
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.47		0.46	0.46	0.46	0.46	0.46	
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9		5.5	5.5	5.5	5.5	5.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	56	1491	667	258	1459		100	1465	655	205	1426	
v/s Ratio Prot		0.20			0.43			0.24			0.36	
v/s Ratio Perm	c0.57		0.16	0.42			c1.16		0.01	0.39		
v/c Ratio	1.20	0.43	0.33	0.88	0.92		2.52	0.52	0.03	0.85	0.77	
Uniform Delay, d1	31.8	21.1	19.9	28.8	29.6		32.2	22.9	17.6	28.5	27.0	
Progression Factor	1.20	1.15	1.23	1.08	1.05		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	169.1	0.7	1.1	10.1	2.9		712.6	1.3	0.1	33.1	4.1	
Delay (s)	207.1	24.9	25.5	41.2	34.0		744.9	24.2	17.7	61.7	31.1	
Level of Service	F	C	C	D	C		F	C	B	E	C	
Approach Delay (s)		37.6			35.0			194.9			35.2	
Approach LOS		D			D			F			D	

Intersection Summary

HCM Average Control Delay	70.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	110.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00		0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85		1.00		1.00	1.00	0.85		0.94	
Flt Protected	0.95	1.00	1.00		1.00		0.95	0.95	1.00		0.99	
Satd. Flow (prot)	1509	3018	1350		3013		1433	1437	1350		1467	
Flt Permitted	0.07	1.00	1.00		1.00		0.95	0.95	1.00		0.99	
Satd. Flow (perm)	108	3018	1350		3013		1433	1437	1350		1467	
Volume (vph)	36	928	277	0	1535	17	621	2	47	22	17	34
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	37	957	286	0	1582	18	640	2	48	23	18	35
RTOR Reduction (vph)	0	0	51	0	0	0	0	0	38	0	26	0
Lane Group Flow (vph)	37	957	235	0	1600	0	320	322	10	0	50	0
Turn Type	pm+pt		Perm			Split		Perm		Split		
Protected Phases	1	6			2		4	4		3	3	
Permitted Phases	6		6						4			
Actuated Green, G (s)	73.0	70.3	70.3		70.3		26.0	26.0	26.0		6.0	
Effective Green, g (s)	72.0	70.3	70.3		70.3		26.0	26.0	26.0		6.0	
Actuated g/C Ratio	0.60	0.59	0.59		0.59		0.22	0.22	0.22		0.05	
Clearance Time (s)	3.0	4.0	4.0		4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	1.0	6.0	6.0		6.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	85	1768	791		1765		310	311	293		73	
v/s Ratio Prot	c0.01	0.32			c0.53		0.22	c0.22			c0.03	
v/s Ratio Perm	0.26		0.17						0.01			
v/c Ratio	0.44	0.54	0.30		0.91		1.03	1.04	0.04		0.69	
Uniform Delay, d1	17.6	15.1	12.5		21.9		47.0	47.0	37.1		56.1	
Progression Factor	0.51	0.46	0.23		1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.9	0.8	0.6		8.2		59.7	60.5	0.0		23.8	
Delay (s)	9.8	7.7	3.5		30.2		106.7	107.5	37.2		79.9	
Level of Service	A	A	A		C		F	F	D		E	
Approach Delay (s)		6.8			30.2			102.2			79.9	
Approach LOS		A			C			F			E	

Intersection Summary

HCM Average Control Delay	36.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↘	↕		↘	↕	↘	↘	↕	↕
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.90	1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.98	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	2971		1504	2987		1509	3018	1214	1476	2893	
Flt Permitted	0.06	1.00		0.21	1.00		0.17	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	98	2971		335	2987		276	3018	1214	270	2893	
Volume (vph)	73	932	55	10	2432	77	1	596	117	15	916	165
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	84	1071	63	11	2795	89	1	685	134	17	1053	190
RTOR Reduction (vph)	0	3	0	0	2	0	0	0	100	0	15	0
Lane Group Flow (vph)	84	1131	0	11	2882	0	1	685	34	17	1228	0
Conf. Peds. (#/hr)	103		80	80		103	78		60	60		78
Conf. Bikes (#/hr)			12			3			1			2
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		
Protected Phases	5	2		1	6			8				4
Permitted Phases	2			6			8		8		4	
Actuated Green, G (s)	69.0	64.7		61.4	60.6		23.0	23.0	23.0	23.0	23.0	
Effective Green, g (s)	69.0	64.7		60.9	60.6		23.0	23.0	23.0	23.0	23.0	
Actuated g/C Ratio	0.69	0.65		0.61	0.61		0.23	0.23	0.23	0.23	0.23	
Clearance Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	1.0	5.0		1.0	5.0		4.0	4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	130	1922		208	1810		63	694	279	62	665	
v/s Ratio Prot	c0.03	0.38		0.00	c0.96			0.23			c0.42	
v/s Ratio Perm	0.42			0.03			0.00		0.03	0.06		
v/c Ratio	0.65	0.59		0.05	1.59		0.02	0.99	0.12	0.27	1.85	
Uniform Delay, d1	26.0	10.1		8.2	19.7		29.8	38.4	30.5	31.6	38.5	
Progression Factor	1.94	0.66		0.58	0.74		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.6	1.1		0.0	266.8		0.5	31.1	0.9	10.6	387.0	
Delay (s)	57.0	7.7		4.7	281.3		30.2	69.5	31.4	42.3	425.5	
Level of Service	E	A		A	F		C	E	C	D	F	
Approach Delay (s)		11.1			280.2			63.2			420.4	
Approach LOS		B			F			E			F	

Intersection Summary

HCM Average Control Delay	227.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	125.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↖	↖	↕		↖	↕	↖
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1509	2977		1509	1588	1350	1509	2951		1509	3018	1350
Flt Permitted	0.13	1.00		0.40	1.00	1.00	0.22	1.00		0.19	1.00	1.00
Satd. Flow (perm)	205	2977		642	1588	1350	350	2951		310	3018	1350
Volume (vph)	21	447	44	306	826	156	91	800	138	172	876	175
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	471	46	322	869	164	96	842	145	181	922	184
RTOR Reduction (vph)	0	10	0	0	0	63	0	19	0	0	0	34
Lane Group Flow (vph)	22	507	0	322	869	101	96	968	0	181	922	150
Turn Type	Perm			Perm			Perm	Perm		Perm		Perm
Protected Phases	2			2			4			4		
Permitted Phases	2			2			4			4		
Actuated Green, G (s)	31.0	31.0		31.0	31.0	31.0	36.0	36.0		36.0	36.0	36.0
Effective Green, g (s)	31.0	31.0		31.0	31.0	31.0	36.0	36.0		36.0	36.0	36.0
Actuated g/C Ratio	0.41	0.41		0.41	0.41	0.41	0.48	0.48		0.48	0.48	0.48
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	85	1230		265	656	558	168	1416		149	1449	648
v/s Ratio Prot		0.17		c0.55			0.33			0.31		
v/s Ratio Perm	0.11			0.50		0.07	0.27			c0.58		0.11
v/c Ratio	0.26	0.41		1.22	1.32	0.18	0.57	0.68		1.21	0.64	0.23
Uniform Delay, d1	14.5	15.6		22.0	22.0	14.0	14.0	15.1		19.5	14.6	11.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.2	1.0		126.2	156.6	0.7	13.4	2.7		142.9	2.1	0.8
Delay (s)	21.7	16.6		148.2	178.6	14.7	27.3	17.8		162.4	16.7	12.2
Level of Service	C	B		F	F	B	C	B		F	B	B
Approach Delay (s)		16.8		151.5			18.6			36.6		
Approach LOS		B		F			B			D		

Intersection Summary

HCM Average Control Delay	66.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↗	↖	↗	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.91	0.95	1.00	1.00	
Frt	1.00	0.94		1.00	1.00		1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1509	2851		1509	3015		1433	1419	1282	1509	1504	
Flt Permitted	0.06	1.00		0.10	1.00		0.95	0.98	1.00	0.95	1.00	
Satd. Flow (perm)	88	2851		163	3015		1433	1419	1282	1509	1504	
Volume (vph)	6	855	498	582	2069	10	260	119	252	16	21	11
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	6	900	524	613	2178	11	274	125	265	17	22	12
RTOR Reduction (vph)	0	70	0	0	0	0	0	0	156	0	10	0
Lane Group Flow (vph)	6	1354	0	613	2189	0	200	199	109	17	24	0
Turn Type	Perm		pm+pt			Split		pm+ov		Split		
Protected Phases	6		5			4		4		5		
Permitted Phases	6		2							4		
Actuated Green, G (s)	72.0	72.0		81.0	81.0		7.0	7.0	13.0	21.0	21.0	
Effective Green, g (s)	72.0	72.0		81.0	81.0		7.0	7.0	12.0	20.0	20.0	
Actuated g/C Ratio	0.60	0.60		0.68	0.68		0.06	0.06	0.10	0.17	0.17	
Clearance Time (s)	4.0	4.0		3.0	4.0		4.0	4.0	3.0	3.0	3.0	
Vehicle Extension (s)	4.5	4.5		1.0	4.5		2.0	2.0	1.0	2.0	2.0	
Lane Grp Cap (vph)	53	1711		166	2035		84	83	171	252	251	
v/s Ratio Prot		0.47		c0.15	0.73		0.14	c0.14	0.03	0.01	c0.02	
v/s Ratio Perm	0.07			c2.33					0.06			
v/c Ratio	0.11	0.79		3.69	1.08		2.38	2.40	0.64	0.07	0.10	
Uniform Delay, d1	10.3	18.3		18.6	19.5		56.5	56.5	51.9	42.1	42.3	
Progression Factor	1.00	1.00		1.99	0.78		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.3	3.8		1221.2	40.7		656.4	664.1	5.7	0.5	0.8	
Delay (s)	14.6	22.1		1258.3	55.9		712.9	720.6	57.6	42.7	43.1	
Level of Service	B	C		F	E		F	F	E	D	D	
Approach Delay (s)		22.1			319.0			453.7				43.0
Approach LOS		C			F			F				D

Intersection Summary

HCM Average Control Delay	248.4	HCM Level of Service	F
HCM Volume to Capacity ratio	2.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.91			0.96		1.00	0.98		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1434			1499		1509	2968		1509	3004	
Flt Permitted		0.92			0.88		0.17	1.00		0.42	1.00	
Satd. Flow (perm)		1331			1343		276	2968		667	3004	
Volume (vph)	23	15	70	74	91	74	258	470	58	13	986	31
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	24	16	73	77	95	77	269	490	60	14	1027	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	113	0	0	249	0	269	550	0	14	1059	0
Turn Type		Perm		Perm		Perm		Perm		Perm		
Protected Phases		2		6		6		4		8		
Permitted Phases		2		6		4		8		8		
Actuated Green, G (s)		19.4		19.4		24.0		24.0		24.0		24.0
Effective Green, g (s)		20.0		20.0		23.0		23.0		23.0		23.0
Actuated g/C Ratio		0.39		0.39		0.45		0.45		0.45		0.45
Clearance Time (s)		4.6		4.6		3.0		3.0		3.0		3.0
Vehicle Extension (s)		4.5		4.5		3.0		3.0		3.0		3.0
Lane Grp Cap (vph)		522		527		124		1339		301		1355
v/s Ratio Prot								0.19				0.35
v/s Ratio Perm		0.08		c0.19		c0.97				0.02		
v/c Ratio		0.22		0.47		2.17		0.41		0.05		0.78
Uniform Delay, d1		10.3		11.6		14.0		9.4		7.9		11.9
Progression Factor		1.00		1.00		1.00		1.00		1.00		1.00
Incremental Delay, d2		1.0		3.0		551.9		0.2		0.1		3.0
Delay (s)		11.2		14.6		565.9		9.6		7.9		14.9
Level of Service		B		B		F		A		A		B
Approach Delay (s)		11.2		14.6				192.3				14.8
Approach LOS		B		B				F				B

Intersection Summary

HCM Average Control Delay	79.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	51.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.95			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	
Frt	1.00	0.99		1.00	1.00			0.91			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1509	2987		1505	3006			1359			1499	
Flt Permitted	0.08	1.00		0.23	1.00			0.75			0.97	
Satd. Flow (perm)	123	2987		362	3006			1024			1452	
Volume (vph)	22	777	33	356	2249	28	56	50	204	19	232	70
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	24	835	35	383	2418	30	60	54	219	20	249	75
RTOR Reduction (vph)	0	3	0	0	1	0	0	69	0	0	10	0
Lane Group Flow (vph)	24	867	0	383	2447	0	0	264	0	0	334	0
Conf. Peds. (#/hr)	48		34	34		48	40		40	40		40
Conf. Bikes (#/hr)			3			4						2
Turn Type	pm+pt		pm+pt		Perm		Perm					
Protected Phases	5	2		1	6			8				4
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	55.5	51.5		65.5	58.0			26.0				26.0
Effective Green, g (s)	55.0	51.5		65.5	58.0			26.5				26.5
Actuated g/C Ratio	0.55	0.52		0.66	0.58			0.26				0.26
Clearance Time (s)	3.5	4.0		3.5	4.0			4.5				4.5
Vehicle Extension (s)	1.0	5.0		1.0	5.0			3.0				3.0
Lane Grp Cap (vph)	116	1538		351	1743			271				385
v/s Ratio Prot	0.01	0.29		c0.11	c0.81							
v/s Ratio Perm	0.11			0.60				c0.26				0.23
v/c Ratio	0.21	0.56		1.09	1.40			0.97				0.87
Uniform Delay, d1	47.3	16.6		12.9	21.0			36.4				35.1
Progression Factor	1.00	1.00		2.62	0.44			1.00				1.00
Incremental Delay, d2	4.0	1.5		46.0	182.1			47.1				18.1
Delay (s)	51.3	18.1		79.8	191.4			83.5				53.2
Level of Service	D	B		E	F			F				D
Approach Delay (s)		19.0			176.3			83.5				53.2
Approach LOS		B			F			F				D

Intersection Summary

HCM Average Control Delay	127.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	132.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖	↖	↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3114		1583	3078		1583	1667	1417	1583	1599	
Flt Permitted	0.20	1.00		0.20	1.00		0.13	1.00	1.00	0.40	1.00	
Satd. Flow (perm)	327	3114		327	3078		211	1667	1417	663	1599	
Volume (vph)	52	683	86	83	1240	284	55	434	89	60	561	208
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	742	93	90	1348	309	60	472	97	65	610	226
RTOR Reduction (vph)	0	16	0	0	33	0	0	0	25	0	2	0
Lane Group Flow (vph)	57	819	0	90	1624	0	60	472	72	65	834	0
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases	6			2			8		8		4	
Permitted Phases	6			2			8		8		4	
Actuated Green, G (s)	20.1	20.1		20.1	20.1		31.0	31.0	31.0	31.0	31.0	
Effective Green, g (s)	20.4	20.4		20.4	20.4		31.6	31.6	31.6	31.6	31.6	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.53	0.53	0.53	0.53	0.53	
Clearance Time (s)	4.3	4.3		4.3	4.3		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	1059		111	1047		111	878	746	349	842	
v/s Ratio Prot		0.26			c0.53			0.28			c0.52	
v/s Ratio Perm	0.17			0.28			0.28		0.05	0.10		
v/c Ratio	0.51	0.77		0.81	1.55		0.54	0.54	0.10	0.19	0.99	
Uniform Delay, d1	15.8	17.7		18.0	19.8		9.4	9.4	7.1	7.5	14.1	
Progression Factor	1.00	1.00		0.96	0.97		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	16.0	5.5		5.9	248.4		17.6	2.4	0.3	1.2	28.8	
Delay (s)	31.8	23.2		23.1	267.7		27.0	11.7	7.3	8.6	42.9	
Level of Service	C	C		C	F		C	B	A	A	D	
Approach Delay (s)		23.8			255.1			12.5			40.4	
Approach LOS		C			F			B			D	

Intersection Summary

HCM Average Control Delay	122.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	122.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↙	↕			↕			↕	↗
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)				4.0	4.0			4.0			4.0	4.0
Lane Util. Factor				1.00	0.95			0.95			0.95	1.00
Frt				1.00	1.00			1.00			1.00	0.85
Flt Protected				0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)				1509	3011			3006			3018	1350
Flt Permitted				0.95	1.00			0.92			1.00	1.00
Satd. Flow (perm)				1509	3011			2764			3018	1350
Volume (vph)	0	0	0	153	2097	30	27	328	0	0	284	102
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	163	2231	32	29	349	0	0	302	109
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	163	2262	0	0	378	0	0	302	109
Turn Type				custom			custom					Free
Protected Phases				2	2		3	3			1	
Permitted Phases				4	4		6	6				Free
Actuated Green, G (s)				34.9	34.9			27.5			20.0	100.0
Effective Green, g (s)				33.5	33.5			26.5			20.0	100.0
Actuated g/C Ratio				0.34	0.34			0.26			0.20	1.00
Clearance Time (s)				3.0	3.0			3.0			4.0	
Vehicle Extension (s)				1.0	1.0			1.0			4.0	
Lane Grp Cap (vph)				566	1129			742			604	1350
v/s Ratio Prot				0.04	c0.28			c0.02			c0.10	
v/s Ratio Perm				0.07	0.47			c0.11				0.08
v/c Ratio				0.29	2.00			0.51			0.50	0.08
Uniform Delay, d1				24.8	33.2			31.2			35.6	0.0
Progression Factor				1.00	1.00			0.35			1.00	1.00
Incremental Delay, d2				1.3	454.6			0.2			2.9	0.1
Delay (s)				26.1	487.9			11.1			38.5	0.1
Level of Service				C	F			B			D	A
Approach Delay (s)		0.0			456.8			11.1			28.3	
Approach LOS		A			F			B			C	

Intersection Summary			
HCM Average Control Delay	349.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	99.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↖		↕			↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98			0.98	
Satd. Flow (prot)	1304	2599		1304	2608	1167		1316			1314	
Flt Permitted	0.11	1.00		0.18	1.00	1.00		0.86			0.74	
Satd. Flow (perm)	148	2599		248	2608	1167		1153			990	
Volume (vph)	23	1200	28	41	1565	22	64	87	34	53	41	16
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	24	1237	29	42	1613	23	66	90	35	55	42	16
RTOR Reduction (vph)	0	1	0	0	0	7	0	10	0	0	7	0
Lane Group Flow (vph)	24	1265	0	42	1613	16	0	181	0	0	106	0
Turn Type	Perm			Perm			Perm	Perm			Perm	
Protected Phases	2			6			6	8			4	
Permitted Phases	2			6			6	8			4	
Actuated Green, G (s)	63.4	63.4		63.4	63.4	63.4		17.5			17.5	
Effective Green, g (s)	64.0	64.0		64.0	64.0	64.0		18.0			18.0	
Actuated g/C Ratio	0.71	0.71		0.71	0.71	0.71		0.20			0.20	
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6		4.5			4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0		2.0			2.0	
Lane Grp Cap (vph)	105	1848		176	1855	830		231			198	
v/s Ratio Prot	0.49			c0.62								
v/s Ratio Perm	0.16			0.17		0.01		c0.16			0.11	
v/c Ratio	0.23	0.68		0.24	0.87	0.02		0.78			0.53	
Uniform Delay, d1	4.5	7.3		4.5	9.8	3.8		34.1			32.2	
Progression Factor	0.37	0.55		0.76	0.56	1.03		1.00			1.00	
Incremental Delay, d2	0.5	0.2		0.3	0.6	0.0		14.6			1.4	
Delay (s)	2.1	4.2		3.7	6.1	3.9		48.7			33.6	
Level of Service	A	A		A	A	A		D			C	
Approach Delay (s)	4.1			6.0				48.7			33.6	
Approach LOS	A			A				D			C	

Intersection Summary

HCM Average Control Delay	8.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕			↕			↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.93			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1304	2599		1304	2599			1266			1301	
Flt Permitted	0.15	1.00		0.15	1.00			0.94			0.89	
Satd. Flow (perm)	211	2599		211	2599			1203			1165	
Volume (vph)	21	1066	26	205	1430	35	33	90	140	55	114	76
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	22	1110	27	214	1490	36	34	94	146	57	119	79
RTOR Reduction (vph)	0	3	0	0	3	0	0	19	0	0	6	0
Lane Group Flow (vph)	22	1134	0	214	1523	0	0	255	0	0	249	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	25.5	25.5		25.5	25.5			25.5			25.5	
Effective Green, g (s)	26.0	26.0		26.0	26.0			26.0			26.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.43			0.43	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0			2.0	
Lane Grp Cap (vph)	91	1126		91	1126			521			505	
v/s Ratio Prot		0.44			0.59							
v/s Ratio Perm	0.10			c1.01				0.21			c0.21	
v/c Ratio	0.24	1.01		2.35	1.35			0.49			0.49	
Uniform Delay, d1	10.8	17.0		17.0	17.0			12.2			12.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	6.2	28.6		640.9	164.6			3.3			3.4	
Delay (s)	17.0	45.6		657.9	181.6			15.5			15.7	
Level of Service	B	D		F	F			B			B	
Approach Delay (s)		45.1			240.2			15.5			15.7	
Approach LOS		D			F			B			B	

Intersection Summary

HCM Average Control Delay	139.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	104.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↗	↖	↖	↗	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	1632		1583	1667	1417	1583	1667	1417	1583	1667	1417
Flt Permitted	0.38	1.00		0.21	1.00	1.00	0.26	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	638	1632		345	1667	1417	439	1667	1417	613	1667	1417
Volume (vph)	89	496	80	71	402	54	56	416	57	97	519	68
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	95	528	85	76	428	57	60	443	61	103	552	72
RTOR Reduction (vph)	0	10	0	0	0	57	0	0	35	0	0	41
Lane Group Flow (vph)	95	603	0	76	428	0	60	443	26	103	552	31
Turn Type	Perm			Perm		NA	Perm		Perm	Perm		custom
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		4
Actuated Green, G (s)	25.5	25.5		25.5	25.5	0.0	25.5	25.5	25.5	25.5	25.5	25.5
Effective Green, g (s)	26.0	26.0		26.0	26.0	0.0	26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.43	0.43		0.43	0.43	0.00	0.43	0.43	0.43	0.43	0.43	0.43
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	276	707		150	722	0	190	722	614	266	722	614
v/s Ratio Prot		c0.37			0.26			0.27				c0.33
v/s Ratio Perm	0.15			0.22			0.14		0.02	0.17		0.02
v/c Ratio	0.34	0.85		0.51	0.59	0.00	0.32	0.61	0.04	0.39	0.76	0.05
Uniform Delay, d1	11.3	15.3		12.3	13.0	30.0	11.2	13.1	9.8	11.6	14.4	9.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4	12.5		11.7	3.6	0.0	4.3	3.9	0.1	4.2	7.6	0.2
Delay (s)	14.7	27.8		24.1	16.5	30.0	15.5	17.0	9.9	15.8	22.0	10.0
Level of Service	B	C		C	B	C	B	B	A	B	C	B
Approach Delay (s)		26.0			18.9			16.1			19.9	
Approach LOS		C			B			B			B	

Intersection Summary

HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗	↖	↖	↖	↖	↖	↖	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.82	1.00	1.00	0.88	1.00	1.00	0.87
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2578		1304	2608	961	1304	1373	1025	1300	1373	1019
Flt Permitted	0.13	1.00		0.12	1.00	1.00	0.13	1.00	1.00	0.14	1.00	1.00
Satd. Flow (perm)	182	2578		170	2608	961	172	1373	1025	198	1373	1019
Volume (vph)	40	1148	66	121	1288	151	78	516	75	108	625	90
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	43	1221	70	129	1370	161	83	549	80	115	665	96
RTOR Reduction (vph)	0	5	0	0	0	96	0	0	52	0	0	61
Lane Group Flow (vph)	43	1286	0	129	1370	65	83	549	28	115	665	35
Conf. Peds. (#/hr)	72		37	37		72	115		110	110		115
Conf. Bikes (#/hr)			4			6			4			4
Turn Type	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	32.7	29.5		37.1	31.7	31.7	35.8	31.4	31.4	38.0	32.5	32.5
Effective Green, g (s)	33.9	30.1		38.3	32.3	32.3	36.8	31.9	31.9	39.0	33.0	33.0
Actuated g/C Ratio	0.38	0.33		0.43	0.36	0.36	0.41	0.35	0.35	0.43	0.37	0.37
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	116	862		148	936	345	132	487	363	159	503	374
v/s Ratio Prot	0.02	0.50		c0.06	c0.53		0.03	0.40		c0.05	c0.48	
v/s Ratio Perm	0.12			0.31		0.07	0.22		0.03	0.26		0.03
v/c Ratio	0.37	1.49		0.87	1.46	0.19	0.63	1.13	0.08	0.72	1.32	0.09
Uniform Delay, d1	23.1	29.9		43.5	28.9	19.8	21.5	29.1	19.3	19.3	28.5	18.7
Progression Factor	0.83	0.69		1.04	1.09	1.78	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	225.2		22.4	211.5	0.6	9.0	80.6	0.1	15.0	158.4	0.1
Delay (s)	20.3	245.7		67.7	242.9	35.8	30.5	109.6	19.4	34.3	186.9	18.8
Level of Service	C	F		E	F	D	C	F	B	C	F	B
Approach Delay (s)		238.5			209.2			90.3			148.4	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	187.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	119.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↖		↖	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frbp, ped/bikes		1.00	0.95		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		0.99	1.00	
Frt		1.00	0.85		0.98		1.00	0.99		1.00	1.00	
Flt Protected		0.99	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1652	1353		1603		1583	1637		1571	1659	
Flt Permitted		0.89	1.00		0.95		0.19	1.00		0.28	1.00	
Satd. Flow (perm)		1474	1353		1526		316	1637		464	1659	
Volume (vph)	24	129	115	34	210	55	66	616	59	10	798	19
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	26	139	124	37	226	59	71	662	63	11	858	20
RTOR Reduction (vph)	0	0	95	0	14	0	0	5	0	0	1	0
Lane Group Flow (vph)	0	165	29	0	308	0	71	720	0	11	877	0
Confl. Peds. (#/hr)	12		25	25		12	21		16	16		21
Confl. Bikes (#/hr)			4			4			4			3
Turn Type	Perm		Perm	Perm		Perm		Perm		Perm		
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)		13.3	13.3		13.3		37.7	37.7		37.7	37.7	
Effective Green, g (s)		13.8	13.8		13.8		38.2	38.2		38.2	38.2	
Actuated g/C Ratio		0.23	0.23		0.23		0.64	0.64		0.64	0.64	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		0.2	0.2		0.2		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		339	311		351		201	1042		295	1056	
v/s Ratio Prot								0.44			c0.53	
v/s Ratio Perm		0.11	0.02		c0.20		0.22			0.02		
v/c Ratio		0.49	0.09		0.88		0.35	0.69		0.04	0.83	
Uniform Delay, d1		20.0	18.2		22.3		5.1	7.1		4.1	8.4	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4	0.0		20.6		4.8	3.8		0.2	7.6	
Delay (s)		20.4	18.2		42.8		9.9	10.8		4.3	16.0	
Level of Service		C	B		D		A	B		A	B	
Approach Delay (s)		19.5			42.8			10.7			15.8	
Approach LOS		B			D			B			B	
Intersection Summary												
HCM Average Control Delay			18.3				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			60.0				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			99.4%				ICU Level of Service				F	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↘	↘	↑↑	↘	↘	↑	↘	↘	↑	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2608	1167	1304	2608	1167	1304	1373	1167	1304	1373	1167
Flt Permitted	0.10	1.00	1.00	0.21	1.00	1.00	0.14	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)	134	2608	1167	291	2608	1167	191	1373	1167	402	1373	1167
Volume (vph)	69	855	31	92	1178	201	85	489	60	223	659	103
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	73	900	33	97	1240	212	89	515	63	235	694	108
RTOR Reduction (vph)	0	0	18	0	0	115	0	0	34	0	0	15
Lane Group Flow (vph)	73	900	15	97	1240	97	89	515	29	235	694	93
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		2			6			8				4
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5
Effective Green, g (s)	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0
Actuated g/C Ratio	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	61	1188	532	133	1188	532	87	625	532	183	625	532
v/s Ratio Prot		0.35			0.48			0.38				0.51
v/s Ratio Perm	c0.55		0.01	0.33		0.08	0.46		0.02	c0.58		0.08
v/c Ratio	1.20	0.76	0.03	0.73	1.04	0.18	1.02	0.82	0.05	1.28	1.11	0.18
Uniform Delay, d1	24.5	20.4	13.5	20.0	24.5	14.5	24.5	21.4	13.7	24.5	24.5	14.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	177.9	4.5	0.1	29.4	38.3	0.7	102.9	8.7	0.0	162.8	70.2	0.2
Delay (s)	202.4	24.9	13.6	49.4	62.8	15.3	127.4	30.0	13.7	187.3	94.7	14.7
Level of Service	F	C	B	D	E	B	F	C	B	F	F	B
Approach Delay (s)		37.4			55.4			41.5			107.3	
Approach LOS		D			E			D			F	

Intersection Summary

HCM Average Control Delay	61.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑	↗	↘	↗	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.90	1.00	1.00	0.88	1.00	1.00	0.94	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.99
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2608	1050	1293	2608	1022	1297	1373	1100	1282	1363	1363
Flt Permitted	0.13	1.00	1.00	0.15	1.00	1.00	0.15	1.00	1.00	0.31	1.00	1.00
Satd. Flow (perm)	184	2608	1050	199	2608	1022	200	1373	1100	417	1363	1363
Volume (vph)	34	1136	106	109	1176	74	80	439	141	95	578	22
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	35	1159	108	111	1200	76	82	448	144	97	590	22
RTOR Reduction (vph)	0	0	53	0	0	37	0	0	26	0	1	0
Lane Group Flow (vph)	35	1159	55	111	1200	39	82	448	118	97	611	0
Conf. Peds. (#/hr)	43		34	34		43	23		40	40		23
Conf. Bikes (#/hr)			2			7			5			2
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		2			6			8				4
Permitted Phases	2		2	6		6	8		8		4	
Actuated Green, G (s)	45.4	45.4	45.4	45.4	45.4	45.4	35.5	35.5	35.5	35.5	35.5	35.5
Effective Green, g (s)	46.0	46.0	46.0	46.0	46.0	46.0	36.0	36.0	36.0	36.0	36.0	36.0
Actuated g/C Ratio	0.51	0.51	0.51	0.51	0.51	0.51	0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	94	1333	537	102	1333	522	80	549	440	167	545	545
v/s Ratio Prot		0.44			0.46			0.33				c0.45
v/s Ratio Perm	0.19		0.05	c0.56		0.04	0.41		0.11	0.23		
v/c Ratio	0.37	0.87	0.10	1.09	0.90	0.07	1.02	0.82	0.27	0.58	1.12	
Uniform Delay, d1	13.3	19.4	11.4	22.0	19.9	11.2	27.0	24.1	18.2	21.1	27.0	
Progression Factor	1.28	1.07	2.70	1.14	1.03	1.58	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.8	2.1	0.1	54.1	1.1	0.0	107.7	9.1	0.3	5.1	76.2	
Delay (s)	19.7	22.8	30.7	79.2	21.6	17.7	134.7	33.2	18.5	26.2	103.2	
Level of Service	B	C	C	E	C	B	F	C	B	C	F	
Approach Delay (s)		23.4			26.0			42.4			92.7	
Approach LOS		C			C			D			F	

Intersection Summary

HCM Average Control Delay	39.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	113.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2590		1304	2540		1304	2554		1304	2538	
Flt Permitted	0.14	1.00		0.19	1.00		0.27	1.00		0.17	1.00	
Satd. Flow (perm)	193	2590		261	2540		376	2554		240	2538	
Volume (vph)	61	940	46	102	1217	255	79	790	127	89	591	129
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	63	969	47	105	1255	263	81	814	131	92	609	133
RTOR Reduction (vph)	0	6	0	0	29	0	0	21	0	0	19	0
Lane Group Flow (vph)	63	1010	0	105	1489	0	81	924	0	92	723	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	28.0	28.0		28.0	28.0		23.0	23.0		23.0	23.0	
Effective Green, g (s)	28.5	28.5		28.5	28.5		23.5	23.5		23.5	23.5	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.39	0.39		0.39	0.39	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	92	1230		124	1207		147	1000		94	994	
v/s Ratio Prot		0.39			c0.59			0.36			0.28	
v/s Ratio Perm	0.33			0.40			0.22			c0.38		
v/c Ratio	0.68	0.82		0.85	1.23		0.55	0.92		0.98	0.73	
Uniform Delay, d1	12.3	13.6		13.8	15.8		14.2	17.4		18.0	15.5	
Progression Factor	0.55	0.58		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	21.6	3.8		47.5	112.4		14.1	15.1		87.2	4.7	
Delay (s)	28.3	11.6		61.3	128.1		28.2	32.5		105.2	20.2	
Level of Service	C	B		E	F		C	C		F	C	
Approach Delay (s)		12.5			123.8			32.2			29.6	
Approach LOS		B			F			C			C	

Intersection Summary

HCM Average Control Delay	59.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	120.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1296	2576		1304	2578		1292	1322		1290	1346	
Flt Permitted	0.14	1.00		0.09	1.00		0.26	1.00		0.27	1.00	
Satd. Flow (perm)	189	2576		122	2578		349	1322		362	1346	
Volume (vph)	29	1146	69	67	994	50	14	295	70	103	334	38
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	35	1381	83	81	1198	60	17	355	84	124	402	46
RTOR Reduction (vph)	0	4	0	0	4	0	0	10	0	0	5	0
Lane Group Flow (vph)	35	1460	0	81	1254	0	17	429	0	124	443	0
Confl. Peds. (#/hr)	31		38	38		31	20		23	23		20
Confl. Bikes (#/hr)						2			2			4
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	50.0	50.0		50.0	50.0		30.9	30.9		30.9	30.9	
Effective Green, g (s)	50.6	50.6		50.6	50.6		31.4	31.4		31.4	31.4	
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.35	0.35		0.35	0.35	
Clearance Time (s)	4.6	4.6		4.6	4.6		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	106	1448		69	1449		122	461		126	470	
v/s Ratio Prot		0.57			0.49			0.32			0.33	
v/s Ratio Perm	0.19			c0.66			0.05			c0.34		
v/c Ratio	0.33	1.01		1.17	0.87		0.14	0.93		0.98	0.94	
Uniform Delay, d1	10.6	19.7		19.7	16.8		20.1	28.2		29.1	28.4	
Progression Factor	0.96	1.11		1.21	1.27		0.66	0.70		1.00	1.00	
Incremental Delay, d2	7.4	24.5		125.9	3.3		0.2	23.9		74.6	27.2	
Delay (s)	17.6	46.4		149.8	24.7		13.4	43.7		103.7	55.6	
Level of Service	B	D		F	C		B	D		F	E	
Approach Delay (s)		45.7			32.3			42.6			66.0	
Approach LOS		D			C			D			E	

Intersection Summary

HCM Average Control Delay	43.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↑	↕	↕	↕	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1660	1417		1647	1417	1583	1667	1417	1583	1645	
Flt Permitted		0.96	1.00		0.76	1.00	0.40	1.00	1.00	0.47	1.00	
Satd. Flow (perm)		1594	1417		1270	1417	662	1667	1417	790	1645	
Volume (vph)	16	183	68	69	218	36	60	334	67	16	390	36
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	19	218	81	82	260	43	71	398	80	19	464	43
RTOR Reduction (vph)	0	0	58	0	0	31	0	0	30	0	3	0
Lane Group Flow (vph)	0	237	23	0	342	12	71	398	50	19	504	0
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4		4	2		2	2		
Actuated Green, G (s)		25.6	25.6		25.6	25.6	55.4	55.4	55.4	55.4	55.4	
Effective Green, g (s)		26.1	26.1		26.1	26.1	55.9	55.9	55.9	55.9	55.9	
Actuated g/C Ratio		0.29	0.29		0.29	0.29	0.62	0.62	0.62	0.62	0.62	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	0.2	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)		462	411		368	411	411	1035	880	491	1022	
v/s Ratio Prot								0.24			c0.31	
v/s Ratio Perm		0.15	0.02		c0.27	0.01	0.11		0.04	0.02		
v/c Ratio		0.51	0.06		0.93	0.03	0.17	0.38	0.06	0.04	0.49	
Uniform Delay, d1		26.6	23.1		31.1	22.9	7.2	8.5	6.7	6.6	9.3	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.95	0.75	
Incremental Delay, d2		1.0	0.1		29.2	0.0	0.9	1.1	0.1	0.0	0.4	
Delay (s)		27.6	23.1		60.3	22.9	8.1	9.6	6.8	6.3	7.4	
Level of Service		C	C		E	C	A	A	A	A	A	
Approach Delay (s)		26.5			56.1			9.0			7.4	
Approach LOS		C			E			A			A	

Intersection Summary

HCM Average Control Delay	21.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2585		1304	2589		1304	1295		1304	1352	
Flt Permitted	0.16	1.00		0.24	1.00		0.35	1.00		0.24	1.00	
Satd. Flow (perm)	220	2585		327	2589		474	1295		330	1352	
Volume (vph)	40	733	46	269	955	49	68	343	209	80	402	44
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	43	788	49	289	1027	53	73	369	225	86	432	47
RTOR Reduction (vph)	0	7	0	0	6	0	0	38	0	0	7	0
Lane Group Flow (vph)	43	830	0	289	1074	0	73	556	0	86	472	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	24.5	24.5		24.5	24.5		26.5	26.5		26.5	26.5	
Effective Green, g (s)	25.0	25.0		25.0	25.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.45	0.45		0.45	0.45	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	92	1077		136	1079		213	583		149	608	
v/s Ratio Prot		0.32			0.41			c0.43			0.35	
v/s Ratio Perm	0.20			c0.88			0.15			0.26		
v/c Ratio	0.47	0.77		2.12	1.00		0.34	0.95		0.58	0.78	
Uniform Delay, d1	12.7	15.0		17.5	17.4		10.7	15.9		12.3	14.0	
Progression Factor	1.00	1.00		0.51	0.50		1.00	1.00		1.00	1.00	
Incremental Delay, d2	16.1	5.3		508.5	7.3		0.4	25.8		3.3	5.7	
Delay (s)	28.8	20.4		517.3	16.0		11.1	41.7		15.6	19.6	
Level of Service	C	C		F	B		B	D		B	B	
Approach Delay (s)		20.8			121.8			38.4			19.0	
Approach LOS		C			F			D			B	

Intersection Summary

HCM Average Control Delay	63.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	113.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕			↕	↗		↕	↖
Sign Control	Free		Free		Stop		Stop		Stop		Stop	
Grade	0%		0%		0%		0%		0%		0%	
Volume (veh/h)	19	1103	93	62	981	63	33	52	71	15	31	44
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	22	1283	108	72	1141	73	38	60	83	17	36	51
Pedestrians	20		26		74		77		77		77	
Lane Width (ft)	12.0		12.0		12.0		12.0		12.0		12.0	
Walking Speed (ft/s)	4.0		4.0		4.0		4.0		4.0		4.0	
Percent Blockage	2		2		6		6		6		6	
Right turn flare (veh)												
Median type					None		None		None		None	
Median storage (veh)												
Upstream signal (ft)	801		400									
pX, platoon unblocked	0.65			0.83			0.73	0.73	0.83	0.73	0.73	0.65
vC, conflicting volume	1291			1465			2259	2890	795	2223	2907	704
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	906			1355			1656	2517	548	1608	2541	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			82			0	0	77	0	0	92
cM capacity (veh/h)	453			392			0	14	366	0	13	646

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	22	855	536	72	760	453	99	83	53	51
Volume Left	22	0	0	72	0	0	38	0	17	0
Volume Right	0	0	108	0	0	73	0	83	0	51
cSH	453	1700	1700	392	1700	1700	0	366	0	646
Volume to Capacity	0.05	0.50	0.32	0.18	0.45	0.27	Err	0.23	Err	0.08
Queue Length 95th (ft)	4	0	0	17	0	0	Err	21	Err	6
Control Delay (s)	13.4	0.0	0.0	16.2	0.0	0.0	Err	17.7	Err	11.0
Lane LOS	B			C			F	C	F	B
Approach Delay (s)	0.2			0.9			Err		Err	
Approach LOS							F		F	

Intersection Summary

Average Delay	Err	
Intersection Capacity Utilization	75.2%	ICU Level of Service D
Analysis Period (min)	15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑	↗	↘	↑	↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.91	1.00	1.00	0.77	1.00	1.00	0.94	1.00	1.00	0.94
Flpb, ped/bikes	0.98	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1275	2608	1062	1286	2608	902	1277	1373	1094	1268	1373	1098
Flt Permitted	0.22	1.00	1.00	0.23	1.00	1.00	0.29	1.00	1.00	0.41	1.00	1.00
Satd. Flow (perm)	300	2608	1062	308	2608	902	385	1373	1094	547	1373	1098
Volume (vph)	32	877	44	39	888	39	48	264	78	108	346	38
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	36	997	50	44	1009	44	55	300	89	123	393	43
RTOR Reduction (vph)	0	0	20	0	0	18	0	0	41	0	0	29
Lane Group Flow (vph)	36	997	30	44	1009	26	55	300	48	123	393	14
Conf. Peds. (#/hr)	55		55	55		88	47		49	49		47
Conf. Bikes (#/hr)			3			5			4			1
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		2			6			8				4
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	52.9	52.9	52.9	52.9	52.9	52.9	28.1	28.1	28.1	28.1	28.1	28.1
Effective Green, g (s)	53.4	53.4	53.4	53.4	53.4	53.4	28.6	28.6	28.6	28.6	28.6	28.6
Actuated g/C Ratio	0.59	0.59	0.59	0.59	0.59	0.59	0.32	0.32	0.32	0.32	0.32	0.32
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	178	1547	630	183	1547	535	122	436	348	174	436	349
v/s Ratio Prot		0.38			c0.39			0.22				c0.29
v/s Ratio Perm	0.12		0.03	0.14		0.03	0.14		0.04	0.22		0.01
v/c Ratio	0.20	0.64	0.05	0.24	0.65	0.05	0.45	0.69	0.14	0.71	0.90	0.04
Uniform Delay, d1	8.5	12.0	7.7	8.7	12.1	7.7	24.4	26.8	21.9	27.0	29.4	21.2
Progression Factor	1.69	1.58	3.04	0.54	0.57	0.41	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	1.2	0.1	1.9	1.3	0.1	1.0	3.6	0.1	10.2	21.0	0.0
Delay (s)	15.7	20.2	23.3	6.6	8.3	3.2	25.4	30.4	22.0	37.2	50.4	21.2
Level of Service	B	C	C	A	A	A	C	C	C	D	D	C
Approach Delay (s)		20.2			8.0			28.1			45.2	
Approach LOS		C			A			C			D	

Intersection Summary		
HCM Average Control Delay	21.5	HCM Level of Service C
HCM Volume to Capacity ratio	0.74	
Actuated Cycle Length (s)	90.0	Sum of lost time (s) 8.0
Intersection Capacity Utilization	83.2%	ICU Level of Service E
Analysis Period (min)	15	
c Critical Lane Group		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↕		↕	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	0.97		1.00	1.00	
Flt Protected		1.00	1.00		0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1659	1417		1652	1417	1583	1614		1583	1661	
Flt Permitted		0.96	1.00		0.92	1.00	0.51	1.00		0.47	1.00	
Satd. Flow (perm)		1606	1417		1531	1417	851	1614		783	1661	
Volume (vph)	14	144	44	32	148	65	24	344	92	30	371	9
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	14	148	45	33	153	67	25	355	95	31	382	9
RTOR Reduction (vph)	0	0	36	0	0	54	0	11	0	0	1	0
Lane Group Flow (vph)	0	162	9	0	186	13	25	439	0	31	390	0
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4		4	2			2		
Actuated Green, G (s)		11.4	11.4		11.4	11.4	39.6	39.6		39.6	39.6	
Effective Green, g (s)		11.9	11.9		11.9	11.9	40.1	40.1		40.1	40.1	
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.67	0.67		0.67	0.67	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		2.0	2.0		2.0	2.0	0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		319	281		304	281	569	1079		523	1110	
v/s Ratio Prot							c0.27				0.23	
v/s Ratio Perm		0.10	0.01		c0.12	0.01	0.03			0.04		
v/c Ratio		0.51	0.03		0.61	0.05	0.04	0.41		0.06	0.35	
Uniform Delay, d1		21.4	19.4		21.9	19.5	3.4	4.5		3.4	4.3	
Progression Factor		1.00	1.00		1.00	1.00	1.88	2.11		1.00	1.00	
Incremental Delay, d2		0.5	0.0		2.6	0.0	0.1	0.7		0.2	0.9	
Delay (s)		21.9	19.4		24.5	19.5	6.5	10.3		3.7	5.2	
Level of Service		C	B		C	B	A	B		A	A	
Approach Delay (s)		21.4			23.2			10.1			5.1	
Approach LOS		C			C			B			A	

Intersection Summary

HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕		↗	↕	↖	↗	↕	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2570		1304	2567		1304	1373	1167	1304	1373	1167
Flt Permitted	0.36	1.00		0.26	1.00		0.40	1.00	1.00	0.35	1.00	1.00
Satd. Flow (perm)	488	2570		361	2567		554	1373	1167	479	1373	1167
Volume (vph)	33	731	77	151	559	64	93	361	94	56	321	40
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	795	84	164	608	70	101	392	102	61	349	43
RTOR Reduction (vph)	0	10	0	0	11	0	0	0	51	0	0	28
Lane Group Flow (vph)	36	869	0	164	667	0	101	392	51	61	349	15
Turn Type	Perm			Perm			Perm			Perm	Perm	Perm
Protected Phases	2			6			8			8	4	4
Permitted Phases	2			6			8			8	4	4
Actuated Green, G (s)	31.0	31.0		31.0	31.0		20.0	20.0	20.0	20.0	20.0	20.0
Effective Green, g (s)	31.5	31.5		31.5	31.5		20.5	20.5	20.5	20.5	20.5	20.5
Actuated g/C Ratio	0.52	0.52		0.52	0.52		0.34	0.34	0.34	0.34	0.34	0.34
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	256	1349		190	1348		189	469	399	164	469	399
v/s Ratio Prot		0.34			0.26			c0.29			0.25	
v/s Ratio Perm	0.07			c0.45			0.18		0.04	0.13		0.01
v/c Ratio	0.14	0.64		0.86	0.49		0.53	0.84	0.13	0.37	0.74	0.04
Uniform Delay, d1	7.3	10.2		12.4	9.1		15.9	18.2	13.6	14.9	17.4	13.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.71	0.81	0.53
Incremental Delay, d2	1.1	2.4		37.2	1.3		1.5	11.7	0.1	0.5	5.3	0.0
Delay (s)	8.5	12.6		49.6	10.4		17.4	29.9	13.7	11.0	19.4	7.0
Level of Service	A	B		D	B		B	C	B	B	B	A
Approach Delay (s)		12.4			18.1			25.0			17.1	
Approach LOS		B			B			C			B	

Intersection Summary

























HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗		↘	↗	↘	↘	↗	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2608	1167	1304	2594		1304	1373	1167	1304	1373	1167
Flt Permitted	0.13	1.00	1.00	0.14	1.00		0.26	1.00	1.00	0.38	1.00	1.00
Satd. Flow (perm)	173	2608	1167	197	2594		353	1373	1167	519	1373	1167
Volume (vph)	40	1004	38	19	1018	38	67	310	37	113	403	30
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	48	1195	45	23	1212	45	80	369	44	135	480	36
RTOR Reduction (vph)	0	0	21	0	2	0	0	0	19	0	0	19
Lane Group Flow (vph)	48	1195	24	23	1255	0	80	369	25	135	480	17
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		Perm
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	47.1	47.1	47.1	47.1	47.1		33.8	33.8	33.8	33.8	33.8	33.8
Effective Green, g (s)	47.7	47.7	47.7	47.7	47.7		34.3	34.3	34.3	34.3	34.3	34.3
Actuated g/C Ratio	0.53	0.53	0.53	0.53	0.53		0.38	0.38	0.38	0.38	0.38	0.38
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	92	1382	619	104	1375		135	523	445	198	523	445
v/s Ratio Prot		0.46			c0.48			0.27			c0.35	
v/s Ratio Perm	0.28		0.02	0.12			0.23		0.02	0.26		0.01
v/c Ratio	0.52	0.86	0.04	0.22	0.91		0.59	0.71	0.06	0.68	0.92	0.04
Uniform Delay, d1	13.7	18.4	10.1	11.3	19.3		22.3	23.6	17.6	23.3	26.5	17.5
Progression Factor	1.30	1.41	1.55	1.04	0.75		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	19.4	7.4	0.1	4.2	9.4		4.6	3.5	0.0	7.5	20.7	0.0
Delay (s)	37.2	33.3	15.8	15.9	24.0		26.8	27.1	17.6	30.8	47.2	17.5
Level of Service	D	C	B	B	C		C	C	B	C	D	B
Approach Delay (s)		32.8			23.8			26.2			42.1	
Approach LOS		C			C			C			D	

Intersection Summary

HCM Average Control Delay	30.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	2608	1167	1304	2608	1167	1304	1373	1167	1304	2502	
Flt Permitted	0.42	1.00	1.00	0.40	1.00	1.00	0.16	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	583	2608	1167	554	2608	1167	213	1373	1167	153	2502	
Volume (vph)	106	506	333	38	472	57	269	813	39	22	647	240
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	550	362	41	513	62	292	884	42	24	703	261
RTOR Reduction (vph)	0	0	52	0	0	28	0	0	21	0	43	0
Lane Group Flow (vph)	115	550	310	41	513	34	292	884	21	24	921	0
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	45.5	45.5	45.5	45.5	45.5	45.5	35.5	35.5	35.5	35.5	35.5	
Effective Green, g (s)	46.0	46.0	46.0	46.0	46.0	46.0	36.0	36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.51	0.51	0.51	0.51	0.51	0.51	0.40	0.40	0.40	0.40	0.40	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	298	1333	596	283	1333	596	85	549	467	61	1001	
v/s Ratio Prot		0.21			0.20			0.64			0.37	
v/s Ratio Perm	0.20		c0.27	0.07		0.03	c1.37		0.02	0.16		
v/c Ratio	0.39	0.41	0.52	0.14	0.38	0.06	3.44	1.61	0.04	0.39	0.92	
Uniform Delay, d1	13.4	13.6	14.7	11.6	13.4	11.1	27.0	27.0	16.5	19.2	25.6	
Progression Factor	1.56	1.71	1.88	0.28	0.36	0.05	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.3	0.6	2.0	0.5	0.4	0.1	1125.0	283.0	0.0	1.5	13.1	
Delay (s)	23.2	23.8	29.5	3.7	5.2	0.7	1152.0	310.0	16.5	20.7	38.7	
Level of Service	C	C	C	A	A	A	F	F	B	C	D	
Approach Delay (s)		25.8			4.6			501.7			38.3	
Approach LOS		C			A			F			D	
Intersection Summary												
HCM Average Control Delay	176.2			HCM Level of Service				F				
HCM Volume to Capacity ratio	1.80											
Actuated Cycle Length (s)	90.0			Sum of lost time (s)				8.0				
Intersection Capacity Utilization	101.2%			ICU Level of Service				G				
Analysis Period (min)	15											
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗	↖	↕		↖	↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2538		1304	1373	1167	1304	2572		1304	2603	
Flt Permitted	0.27	1.00		0.44	1.00	1.00	0.20	1.00		0.15	1.00	
Satd. Flow (perm)	376	2538		602	1373	1167	278	2572		211	2603	
Volume (vph)	10	379	82	85	503	75	97	981	100	61	859	10
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	11	408	88	91	541	81	104	1055	108	66	924	11
RTOR Reduction (vph)	0	31	0	0	0	23	0	13	0	0	1	0
Lane Group Flow (vph)	11	465	0	91	541	58	104	1150	0	66	934	0
Turn Type	Perm			Perm			Perm	Perm		Perm		
Protected Phases	2			6			6	8		4		
Permitted Phases	2			6			6	8		4		
Actuated Green, G (s)	25.5	25.5		25.5	25.5	25.5	25.5	25.5		25.5	25.5	
Effective Green, g (s)	26.0	26.0		26.0	26.0	26.0	26.0	26.0		26.0	26.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43	0.43	0.43	0.43		0.43	0.43	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	163	1100		261	595	506	120	1115		91	1128	
v/s Ratio Prot	0.18			c0.39			c0.45			0.36		
v/s Ratio Perm	0.03			0.15			0.05	0.37		0.31		
v/c Ratio	0.07	0.42		0.35	0.91	0.11	0.87	1.03		0.73	0.83	
Uniform Delay, d1	9.9	11.8		11.3	15.9	10.1	15.4	17.0		14.0	15.0	
Progression Factor	0.50	0.41		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	1.1		3.6	20.3	0.5	42.6	35.3		21.4	4.9	
Delay (s)	5.7	6.0		15.0	36.2	10.6	58.1	52.3		35.4	19.9	
Level of Service	A			B		D	B	E	D	D	B	
Approach Delay (s)	6.0			30.6			52.8			20.9		
Approach LOS	A			C			D			C		

Intersection Summary

HCM Average Control Delay	32.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗			↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.96			0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1304	2589		1304	2582		1304	1324			1354	
Flt Permitted	0.17	1.00		0.20	1.00		0.37	1.00			0.89	
Satd. Flow (perm)	233	2589		276	2582		502	1324			1217	
Volume (vph)	21	769	39	74	816	58	25	214	65	99	481	23
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	22	801	41	77	850	60	26	223	68	103	501	24
RTOR Reduction (vph)	0	4	0	0	6	0	0	12	0	0	1	0
Lane Group Flow (vph)	22	838	0	77	904	0	26	279	0	0	627	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	34.4	34.4		34.4	34.4		46.6	46.6			46.6	
Effective Green, g (s)	34.9	34.9		34.9	34.9		47.1	47.1			47.1	
Actuated g/C Ratio	0.39	0.39		0.39	0.39		0.52	0.52			0.52	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5			4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)	90	1004		107	1001		263	693			637	
v/s Ratio Prot		0.32			c0.35			0.21				
v/s Ratio Perm	0.09			0.28			0.05				c0.51	
v/c Ratio	0.24	0.83		0.72	0.90		0.10	0.40			0.98	
Uniform Delay, d1	18.6	24.9		23.4	26.0		10.8	12.9			21.1	
Progression Factor	1.28	1.03		1.13	1.12		1.00	1.00			1.00	
Incremental Delay, d2	6.1	7.8		3.8	1.5		0.1	0.1			31.2	
Delay (s)	30.0	33.5		30.2	30.7		10.8	13.1			52.3	
Level of Service	C	C		C	C		B	B			D	
Approach Delay (s)		33.4			30.6			12.9			52.3	
Approach LOS		C			C			B			D	

Intersection Summary

HCM Average Control Delay	34.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	117.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↗		↖	↗	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2574		1304	1373	1167	1304	1362		1304	1369	
Flt Permitted	0.29	1.00		0.46	1.00	1.00	0.27	1.00		0.35	1.00	
Satd. Flow (perm)	402	2574		628	1373	1167	370	1362		482	1369	
Volume (vph)	18	405	38	17	505	77	18	390	20	35	475	9
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	19	435	41	18	543	83	19	419	22	38	511	10
RTOR Reduction (vph)	0	11	0	0	0	45	0	4	0	0	1	0
Lane Group Flow (vph)	19	465	0	18	543	38	19	437	0	38	520	0
Turn Type	Perm			Perm			Perm	Perm		Perm		
Protected Phases	2			6			6	8		8		4
Permitted Phases	2			6			6	8		4		
Actuated Green, G (s)	27.0	27.0		27.0	27.0	27.0	24.0	24.0		24.0	24.0	
Effective Green, g (s)	27.5	27.5		27.5	27.5	27.5	24.5	24.5		24.5	24.5	
Actuated g/C Ratio	0.46	0.46		0.46	0.46	0.46	0.41	0.41		0.41	0.41	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	184	1180		288	629	535	151	556		197	559	
v/s Ratio Prot	0.18			c0.40			0.32			c0.38		
v/s Ratio Perm	0.05			0.03			0.05			0.08		
v/c Ratio	0.10	0.39		0.06	0.86	0.07	0.13	0.79		0.19	0.93	
Uniform Delay, d1	9.2	10.7		9.1	14.6	9.1	11.1	15.5		11.4	16.9	
Progression Factor	1.00	1.00		1.12	0.82	1.42	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	1.0		0.2	6.7	0.1	0.1	6.7		0.2	21.7	
Delay (s)	10.4	11.7		10.3	18.7	13.0	11.2	22.2		11.6	38.6	
Level of Service	B			B			B	C		B	D	
Approach Delay (s)	11.7			17.8			21.7			36.8		
Approach LOS	B			B			C			D		

Intersection Summary

HCM Average Control Delay	22.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↗	↖	↖	↗↗		↖	↗	↖	↖	↗	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frbp, ped/bikes	1.00	1.00	0.80	1.00	0.99		1.00	1.00	0.93	1.00	1.00	
Flpb, ped/bikes	0.96	1.00	1.00	0.93	1.00		0.97	1.00	1.00	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1252	2608	937	1214	2567		1269	1373	1083	1259	1354	
Flt Permitted	0.28	1.00	1.00	0.40	1.00		0.54	1.00	1.00	0.42	1.00	
Satd. Flow (perm)	372	2608	937	505	2567		723	1373	1083	557	1354	
Volume (vph)	5	606	45	39	830	41	107	212	85	82	147	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	638	47	41	874	43	113	223	89	86	155	11
RTOR Reduction (vph)	0	0	14	0	2	0	0	0	70	0	4	0
Lane Group Flow (vph)	5	638	33	41	915	0	113	223	19	86	162	0
Conf. Peds. (#/hr)	71		75	75		71	33		50	50		33
Conf. Bikes (#/hr)			7			6			7			6
Turn Type	Perm		Perm	Perm		Perm		Perm	Perm	Perm		
Protected Phases		2			6		8	8			4	
Permitted Phases	2		2	6		8		8	4			
Actuated Green, G (s)	62.6	62.6	62.6	62.6	62.6	18.4	18.4	18.4	18.4	18.4		
Effective Green, g (s)	63.1	63.1	63.1	63.1	63.1	18.9	18.9	18.9	18.9	18.9		
Actuated g/C Ratio	0.70	0.70	0.70	0.70	0.70	0.21	0.21	0.21	0.21	0.21		
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		
Lane Grp Cap (vph)	261	1828	657	354	1800	152	288	227	117	284		
v/s Ratio Prot		0.24			c0.36		c0.16				0.12	
v/s Ratio Perm	0.01		0.04	0.08		0.16		0.02	0.15			
v/c Ratio	0.02	0.35	0.05	0.12	0.51	0.74	0.77	0.08	0.74	0.57		
Uniform Delay, d1	4.1	5.3	4.2	4.4	6.2	33.3	33.5	28.6	33.2	31.9		
Progression Factor	0.84	0.73	0.82	2.22	2.55	1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	0.1	0.5	0.1	0.4	0.5	15.7	11.2	0.1	18.5	1.7		
Delay (s)	3.5	4.3	3.6	10.0	16.5	49.0	44.7	28.6	51.7	33.6		
Level of Service	A	A	A	B	B	D	D	C	D	C		
Approach Delay (s)		4.3			16.2		42.5			39.8		
Approach LOS		A			B		D			D		

Intersection Summary

HCM Average Control Delay	20.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↖	↖		↖	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes		1.00	0.93		0.99		1.00	0.98		1.00	1.00	0.93
Flpb, ped/bikes		0.99	1.00		0.99		0.97	1.00		0.96	1.00	1.00
Frt		1.00	0.85		0.98		1.00	0.97		1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1643	1323		1573		1543	1583		1514	1667	1319
Flt Permitted		0.95	1.00		0.88		0.49	1.00		0.61	1.00	1.00
Satd. Flow (perm)		1578	1323		1409		795	1583		970	1667	1319
Volume (vph)	14	78	69	48	99	23	32	180	51	12	408	18
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	15	81	72	50	103	24	33	188	53	12	425	19
RTOR Reduction (vph)	0	0	58	0	14	0	0	10	0	0	0	6
Lane Group Flow (vph)	0	96	14	0	163	0	33	231	0	12	425	13
Confl. Peds. (#/hr)	38		55	55		38	31		39	39		31
Confl. Bikes (#/hr)						1						2
Turn Type	Perm		Perm	Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)		10.8	10.8		10.8		40.2	40.2		40.2	40.2	40.2
Effective Green, g (s)		11.3	11.3		11.3		40.7	40.7		40.7	40.7	40.7
Actuated g/C Ratio		0.19	0.19		0.19		0.68	0.68		0.68	0.68	0.68
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		297	249		265		539	1074		658	1131	895
v/s Ratio Prot								0.15			c0.26	
v/s Ratio Perm		0.06	0.01		c0.12		0.04			0.01		0.01
v/c Ratio		0.32	0.05		0.62		0.06	0.22		0.02	0.38	0.01
Uniform Delay, d1		21.0	20.0		22.4		3.2	3.6		3.1	4.2	3.1
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.2	0.0		3.0		0.2	0.5		0.1	1.0	0.0
Delay (s)		21.3	20.0		25.3		3.5	4.1		3.2	5.1	3.2
Level of Service		C	C		C		A	A		A	A	A
Approach Delay (s)		20.7			25.3			4.0			5.0	
Approach LOS		C			C			A			A	
Intersection Summary												
HCM Average Control Delay			10.6				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.43									
Actuated Cycle Length (s)			60.0				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			61.9%				ICU Level of Service				B	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑	↗	↘	↑	↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.84	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.83
Flpb, ped/bikes	0.94	1.00	1.00	0.98	1.00	1.00	0.95	1.00	1.00	0.93	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1225	2608	980	1284	2608	987	1240	1373	994	1213	1373	966
Flt Permitted	0.41	1.00	1.00	0.33	1.00	1.00	0.25	1.00	1.00	0.42	1.00	1.00
Satd. Flow (perm)	534	2608	980	452	2608	987	330	1373	994	542	1373	966
Volume (vph)	24	520	101	187	582	117	57	305	73	59	450	18
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	26	559	109	201	626	126	61	328	78	63	484	19
RTOR Reduction (vph)	0	0	63	0	0	59	0	0	48	0	0	12
Lane Group Flow (vph)	26	559	46	201	626	67	61	328	30	63	484	7
Confl. Peds. (#/hr)	102		106	106		102	121		103	103		121
Turn Type	Perm		Perm	pm+pt		Perm	Perm		Perm	Perm		Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	37.2	37.2	37.2	47.2	47.2	47.2	33.8	33.8	33.8	33.8	33.8	33.8
Effective Green, g (s)	37.7	37.7	37.7	47.7	47.7	47.7	34.3	34.3	34.3	34.3	34.3	34.3
Actuated g/C Ratio	0.42	0.42	0.42	0.53	0.53	0.53	0.38	0.38	0.38	0.38	0.38	0.38
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	224	1092	411	295	1382	523	126	523	379	207	523	368
v/s Ratio Prot		0.21		c0.05	0.24			0.24			c0.35	
v/s Ratio Perm	0.05		0.05	c0.32		0.07	0.18		0.03	0.12		0.01
v/c Ratio	0.12	0.51	0.11	0.68	0.45	0.13	0.48	0.63	0.08	0.30	0.93	0.02
Uniform Delay, d1	16.0	19.3	15.9	14.5	13.1	10.7	21.1	22.6	17.8	19.5	26.6	17.4
Progression Factor	1.17	1.17	1.81	1.18	1.12	1.02	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	1.6	0.5	4.4	0.9	0.4	1.1	1.7	0.0	0.3	22.1	0.0
Delay (s)	19.8	24.2	29.4	21.6	15.6	11.3	22.2	24.3	17.8	19.8	48.7	17.4
Level of Service	B	C	C	C	B	B	C	C	B	B	D	B
Approach Delay (s)		24.9			16.3			23.0			44.4	
Approach LOS		C			B			C			D	

Intersection Summary

HCM Average Control Delay	25.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↗	↖	↗	↗	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00	1.00	1.00	0.95	
Frbp, ped/bikes		0.95			0.98		1.00	1.00	0.90	1.00	1.00	
Flpb, ped/bikes		1.00			0.99		0.98	1.00	1.00	0.96	1.00	
Frt		0.91			0.96		1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00			0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1443			1541		1550	1667	1278	1521	3140	
Flt Permitted		0.98			0.93		0.29	1.00	1.00	0.43	1.00	
Satd. Flow (perm)		1414			1452		480	1667	1278	695	3140	
Volume (vph)	8	39	85	52	162	99	35	351	29	27	663	24
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	9	42	91	56	174	106	38	377	31	29	713	26
RTOR Reduction (vph)	0	52	0	0	28	0	0	0	18	0	5	0
Lane Group Flow (vph)	0	90	0	0	308	0	38	377	13	29	734	0
Conf. Peds. (#/hr)	41		59	59		41	38		42	42		38
Conf. Bikes (#/hr)			4			7			1			3
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		2			6			8				4
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		25.5			25.5		25.5	25.5	25.5	25.5	25.5	
Effective Green, g (s)		26.0			26.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio		0.43			0.43		0.43	0.43	0.43	0.43	0.43	0.43
Clearance Time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)		613			629		208	722	554	301	1361	
v/s Ratio Prot								0.23			c0.23	
v/s Ratio Perm		0.06			c0.21		0.08		0.01	0.04		
v/c Ratio		0.15			0.49		0.18	0.52	0.02	0.10	0.54	
Uniform Delay, d1		10.3			12.2		10.5	12.5	9.7	10.1	12.6	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5			2.7		1.9	2.7	0.1	0.6	1.5	
Delay (s)		10.8			14.9		12.4	15.1	9.8	10.7	14.1	
Level of Service		B			B		B	B	A	B	B	
Approach Delay (s)		10.8			14.9			14.5			14.0	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM Average Control Delay			14.1				HCM Level of Service			B		
HCM Volume to Capacity ratio			0.51									
Actuated Cycle Length (s)			60.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			73.3%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑		↑	↑	↑	↑	↑	↑	↑↓	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00	1.00		1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1373	1167		1373	1167	1304	1373	1167	1304	2593	
Flt Permitted		1.00	1.00		1.00	1.00	0.19	1.00	1.00	0.17	1.00	
Satd. Flow (perm)		1373	1167		1373	1167	264	1373	1167	227	2593	
Volume (vph)	0	203	56	0	154	60	30	507	45	86	736	29
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	221	61	0	167	65	33	551	49	93	800	32
RTOR Reduction (vph)	0	0	46	0	0	49	0	0	31	0	3	0
Lane Group Flow (vph)	0	221	15	0	167	16	33	551	18	93	829	0
Turn Type		Perm			Perm		Perm		Perm		Perm	
Protected Phases		2			6			8			4	
Permitted Phases		2			6		8		8		4	
Actuated Green, G (s)		20.5	20.5		20.5	20.5	30.5	30.5	30.5	30.5	30.5	
Effective Green, g (s)		21.0	21.0		21.0	21.0	31.0	31.0	31.0	31.0	31.0	
Actuated g/C Ratio		0.25	0.25		0.25	0.25	0.36	0.36	0.36	0.36	0.36	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)		339	288		339	288	96	501	426	83	946	
v/s Ratio Prot		c0.16			c0.12			0.40			0.32	
v/s Ratio Perm		0.01			0.01		0.12		0.02		c0.41	
v/c Ratio		0.65	0.05		0.49	0.06	0.34	1.10	0.04	1.12	0.88	
Uniform Delay, d1		28.7	24.4		27.4	24.4	19.6	27.0	17.4	27.0	25.2	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		9.4	0.3		5.0	0.4	9.5	70.2	0.2	135.1	11.2	
Delay (s)		38.1	24.8		32.5	24.8	29.1	97.2	17.6	162.1	36.4	
Level of Service		D	C		C	C	C	F	B	F	D	
Approach Delay (s)		35.2			30.3			87.5			49.1	
Approach LOS		D			C			F			D	

Intersection Summary

HCM Average Control Delay	56.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↗		↙	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.89		1.00	0.92
Flpb, ped/bikes	0.85	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.93		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1103	2608	2160		1304	1074
Flt Permitted	0.65	1.00	1.00		0.95	1.00
Satd. Flow (perm)	750	2608	2160		1304	1074
Volume (vph)	48	484	78	76	157	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	52	526	85	83	171	11
RTOR Reduction (vph)	0	0	24	0	0	9
Lane Group Flow (vph)	52	526	144	0	171	2
Conf. Peds. (#/hr)	82			82	87	61
Conf. Bikes (#/hr)				7		3
Turn Type	Perm				Perm	
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	64.0	64.0	64.0		17.0	17.0
Effective Green, g (s)	64.5	64.5	64.5		17.5	17.5
Actuated g/C Ratio	0.72	0.72	0.72		0.19	0.19
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	538	1869	1548		254	209
v/s Ratio Prot		c0.20	0.07		c0.13	
v/s Ratio Perm	0.07					0.00
v/c Ratio	0.10	0.28	0.09		0.67	0.01
Uniform Delay, d1	3.9	4.5	3.9		33.6	29.3
Progression Factor	0.67	0.69	1.99		1.00	1.00
Incremental Delay, d2	0.3	0.3	0.1		5.4	0.0
Delay (s)	2.9	3.4	7.8		39.0	29.3
Level of Service	A	A	A		D	C
Approach Delay (s)		3.4	7.8		38.4	
Approach LOS		A	A		D	
Intersection Summary						
HCM Average Control Delay			11.1		HCM Level of Service	B
HCM Volume to Capacity ratio			0.37			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			52.2%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	1667	1417		1646	1417	1583	1667	1417	1583	1667	1417
Flt Permitted	0.62	1.00	1.00		0.90	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1033	1667	1417		1494	1417	1583	1667	1417	1583	1667	1417
Volume (vph)	22	181	330	34	105	37	190	574	35	20	614	183
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	197	359	37	114	40	207	624	38	22	667	199
RTOR Reduction (vph)	0	0	52	0	0	28	0	0	18	0	0	120
Lane Group Flow (vph)	24	197	307	0	151	12	207	624	20	22	667	79
Turn Type	Perm		pm+ov	Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases		2	3		6		3	8		7		4
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	27.0	27.0	41.4		27.0	27.0	14.4	47.1	47.1	2.4	35.1	35.1
Effective Green, g (s)	27.5	27.5	42.4		27.5	27.5	14.9	47.6	47.6	2.9	35.6	35.6
Actuated g/C Ratio	0.31	0.31	0.47		0.31	0.31	0.17	0.53	0.53	0.03	0.40	0.40
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	1.0	3.0	3.0
Lane Grp Cap (vph)	316	509	731		457	433	262	882	749	51	659	561
v/s Ratio Prot		0.12	c0.07				c0.13	0.37		0.01	c0.40	
v/s Ratio Perm	0.02		0.15		0.10	0.01			0.01			0.06
v/c Ratio	0.08	0.39	0.42		0.33	0.03	0.79	0.71	0.03	0.43	1.01	0.14
Uniform Delay, d1	22.2	24.6	15.7		24.1	21.9	36.0	16.0	10.1	42.7	27.2	17.4
Progression Factor	1.00	1.00	1.00		1.00	1.00	0.89	1.64	2.56	1.00	1.00	1.00
Incremental Delay, d2	0.5	2.2	0.4		1.9	0.1	14.1	2.5	0.0	2.1	38.1	0.1
Delay (s)	22.7	26.8	16.1		26.1	22.0	46.0	28.7	25.9	44.9	65.3	17.5
Level of Service	C	C	B		C	C	D	C	C	D	E	B
Approach Delay (s)		20.0			25.2			32.7			54.1	
Approach LOS		C			C			C			D	

Intersection Summary

HCM Average Control Delay	36.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↗	↕↕	↗	↔	↕↕
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	2530	1167	2608	1167	1304	2608
Flt Permitted	0.95	1.00	1.00	1.00	0.38	1.00
Satd. Flow (perm)	2530	1167	2608	1167	518	2608
Volume (vph)	134	183	573	295	252	792
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	144	197	616	317	271	852
RTOR Reduction (vph)	0	172	0	103	0	0
Lane Group Flow (vph)	144	25	616	214	271	852
Turn Type		Perm		Perm	pm+pt	
Protected Phases	6		8		7	4
Permitted Phases		6		8		4
Actuated Green, G (s)	10.7	10.7	60.3	60.3	70.3	70.3
Effective Green, g (s)	11.2	11.2	60.8	60.8	70.8	70.8
Actuated g/C Ratio	0.12	0.12	0.68	0.68	0.79	0.79
Clearance Time (s)	4.5	4.5	4.5	4.5	3.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	1.0	3.0
Lane Grp Cap (vph)	315	145	1762	788	460	2052
v/s Ratio Prot	c0.06		0.24		c0.04	0.33
v/s Ratio Perm		0.02		0.18	c0.42	
v/c Ratio	0.46	0.17	0.35	0.27	0.59	0.42
Uniform Delay, d1	36.6	35.2	6.2	5.8	3.0	3.0
Progression Factor	1.09	1.56	1.00	1.00	1.27	0.30
Incremental Delay, d2	1.1	0.6	0.5	0.9	0.7	0.4
Delay (s)	40.9	55.6	6.7	6.7	4.6	1.3
Level of Service	D	E	A	A	A	A
Approach Delay (s)	49.4		6.7			2.1
Approach LOS	D		A			A

Intersection Summary

HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1304	1167	2608	1167	1304	2608
Flt Permitted	0.95	1.00	1.00	1.00	0.30	1.00
Satd. Flow (perm)	1304	1167	2608	1167	406	2608
Volume (vph)	4	41	761	154	79	726
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	4	44	810	164	84	772
RTOR Reduction (vph)	0	35	0	55	0	0
Lane Group Flow (vph)	4	9	810	109	84	772
Turn Type	pm+ov		Perm pm+pt			
Protected Phases	6	7	8		7	4
Permitted Phases		6		8	4	
Actuated Green, G (s)	12.7	17.0	59.5	59.5	68.3	68.3
Effective Green, g (s)	13.2	18.0	60.0	60.0	68.8	68.8
Actuated g/C Ratio	0.15	0.20	0.67	0.67	0.76	0.76
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	191	285	1739	778	358	1994
v/s Ratio Prot	0.00	c0.00	c0.31		0.01	c0.30
v/s Ratio Perm		0.01		0.09	0.17	
v/c Ratio	0.02	0.03	0.47	0.14	0.23	0.39
Uniform Delay, d1	32.9	29.0	7.3	5.5	3.3	3.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.0	0.9	0.4	0.1	0.6
Delay (s)	32.9	29.0	8.2	5.9	3.4	4.1
Level of Service	C	C	A	A	A	A
Approach Delay (s)	29.3		7.8			4.0
Approach LOS	C		A			A

Intersection Summary

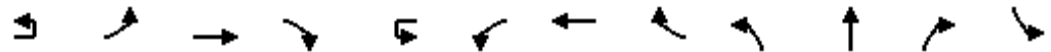
HCM Average Control Delay	6.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1558	1667		1583	1635			1640			1621	
Flt Permitted	0.27	1.00		0.14	1.00			0.93			0.92	
Satd. Flow (perm)	443	1667		238	1635			1532			1501	
Volume (vph)	244	936	0	17	503	46	68	692	48	28	339	61
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	257	985	0	18	529	48	72	728	51	29	357	64
RTOR Reduction (vph)	0	0	0	0	5	0	0	4	0	0	10	0
Lane Group Flow (vph)	257	985	0	18	572	0	0	847	0	0	440	0
Conf. Peds. (#/hr)	28		25	25		28	21		28	28		21
Conf. Bikes (#/hr)			13			10			6			3
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			24.0			24.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			24.0			24.0	
Actuated g/C Ratio	0.47	0.47		0.47	0.47			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	207	778		111	763			613			600	
v/s Ratio Prot		c0.59			0.35							
v/s Ratio Perm	0.58			0.08				c0.55			0.29	
v/c Ratio	1.24	1.27		0.16	0.75			1.38			0.73	
Uniform Delay, d1	16.0	16.0		9.2	13.1			18.0			15.3	
Progression Factor	1.00	1.00		0.70	0.81			2.18			1.00	
Incremental Delay, d2	142.7	129.9		0.7	1.6			177.8			7.7	
Delay (s)	158.7	145.9		7.2	12.3			217.2			23.0	
Level of Service	F	F		A	B			F			C	
Approach Delay (s)		148.5			12.1			217.2			23.0	
Approach LOS		F			B			F			C	

Intersection Summary

HCM Average Control Delay	123.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	140.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔	↑↑↑	↗		↔	↑↑↑	↗	↖	↖		↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		1.00	0.91	1.00		1.00	0.91	1.00	1.00	1.00		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1583	4550	1417		1583	4550	1417	1583	1661		1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.54	1.00		0.12
Satd. Flow (perm)		1583	4550	1417		1583	4550	1417	904	1661		205
Volume (vph)	35	158	2352	16	3	92	2096	188	17	486	12	190
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	36	163	2425	16	3	95	2161	194	18	501	12	196
RTOR Reduction (vph)	0	0	0	5	0	0	0	87	0	1	0	0
Lane Group Flow (vph)	0	199	2425	11	0	98	2161	107	18	512	0	196
Turn Type	Prot	Prot		Perm	Prot	Prot		pm+ov	pm+pt			pm+pt
Protected Phases	1	1	6		5	5	2	7	3	8		7
Permitted Phases				6				2	8			4
Actuated Green, G (s)		17.7	40.3	40.3		11.3	33.9	45.9	40.2	37.4		53.4
Effective Green, g (s)		17.7	41.3	41.3		11.3	34.9	46.9	42.2	39.4		55.4
Actuated g/C Ratio		0.15	0.34	0.34		0.09	0.29	0.39	0.35	0.33		0.46
Clearance Time (s)		4.0	5.0	5.0		4.0	5.0	4.0	4.0	6.0		4.0
Vehicle Extension (s)		3.0	4.4	4.4		3.0	4.3	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		233	1566	488		149	1323	601	334	545		232
v/s Ratio Prot		c0.13	c0.53			0.06	0.47	0.02	0.00	c0.31		c0.08
v/s Ratio Perm				0.01				0.06	0.02			0.30
v/c Ratio		0.85	1.55	0.02		0.66	1.63	0.18	0.05	0.94		0.84
Uniform Delay, d1		49.9	39.4	26.0		52.5	42.5	23.9	25.5	39.2		25.6
Progression Factor		1.00	1.00	1.00		1.47	0.45	0.72	1.00	1.00		1.20
Incremental Delay, d2		24.9	250.0	0.1		1.0	285.3	0.0	0.1	24.5		20.9
Delay (s)		74.8	289.4	26.1		78.3	304.7	17.4	25.6	63.7		51.7
Level of Service		E	F	C		E	F	B	C	E		D
Approach Delay (s)			271.6				272.9			62.4		
Approach LOS			F				F			E		

Intersection Summary

HCM Average Control Delay	234.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	111.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations	↱	
Ideal Flow (vphpl)	1700	1700
Total Lost time (s)	4.0	
Lane Util. Factor	1.00	
Frt	0.97	
Flt Protected	1.00	
Satd. Flow (prot)	1622	
Flt Permitted	1.00	
Satd. Flow (perm)	1622	
Volume (vph)	250	54
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	258	56
RTOR Reduction (vph)	5	0
Lane Group Flow (vph)	309	0
Turn Type		
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	46.6	
Effective Green, g (s)	48.6	
Actuated g/C Ratio	0.41	
Clearance Time (s)	6.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	657	
v/s Ratio Prot	0.19	
v/s Ratio Perm		
v/c Ratio	0.47	
Uniform Delay, d1	26.2	
Progression Factor	1.09	
Incremental Delay, d2	0.5	
Delay (s)	28.9	
Level of Service	C	
Approach Delay (s)	37.7	
Approach LOS	D	

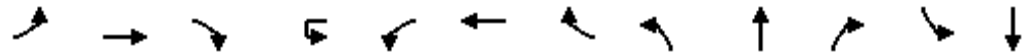
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1571	1633		1583	1630		1583	3029		1583	3012	
Flt Permitted	0.35	1.00		0.08	1.00		0.12	1.00		0.12	1.00	
Satd. Flow (perm)	580	1633		133	1630		208	3029		208	3012	
Volume (vph)	242	948	112	96	450	56	263	873	232	18	1090	332
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	252	988	117	100	469	58	274	909	242	19	1135	346
RTOR Reduction (vph)	0	5	0	0	5	0	0	26	0	0	32	0
Lane Group Flow (vph)	252	1100	0	100	522	0	274	1125	0	19	1449	0
Conf. Peds. (#/hr)	18		24	24		18	27		25	25		27
Conf. Bikes (#/hr)			5			42			5			2
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	49.0	49.0		49.0	49.0		31.1	31.1		31.1	31.1	
Effective Green, g (s)	50.0	50.0		50.0	50.0		32.0	32.0		32.0	32.0	
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.36	0.36		0.36	0.36	
Clearance Time (s)	5.0	5.0		5.0	5.0		4.9	4.9		4.9	4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	322	907		74	906		74	1077		74	1071	
v/s Ratio Prot		0.67			0.32			0.37			0.48	
v/s Ratio Perm	0.43			c0.75			c1.32			0.09		
v/c Ratio	0.78	1.21		1.35	0.58		3.70	1.04		0.26	1.35	
Uniform Delay, d1	15.7	20.0		20.0	13.1		29.0	29.0		20.6	29.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	17.1	106.0		224.1	2.7		1248.7	39.7		8.2	164.9	
Delay (s)	32.9	126.0		244.1	15.7		1277.7	68.7		28.8	193.9	
Level of Service	C	F		F	B		F	E		C	F	
Approach Delay (s)		108.7			52.2			301.1			191.8	
Approach LOS		F			D			F			F	

Intersection Summary

HCM Average Control Delay	182.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.27		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	147.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗		↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1583	4550	1417		1583	4550	1417	1583	3167	1417	1583	3167
Flt Permitted	0.95	1.00	1.00		0.95	1.00	1.00	0.12	1.00	1.00	0.24	1.00
Satd. Flow (perm)	1583	4550	1417		1583	4550	1417	198	3167	1417	395	3167
Volume (vph)	61	2293	223	10	91	1627	397	151	788	126	10	917
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	63	2364	230	10	94	1677	409	156	812	130	10	945
RTOR Reduction (vph)	0	0	20	0	0	0	110	0	0	78	0	0
Lane Group Flow (vph)	63	2364	210	0	104	1677	299	156	812	52	10	945
Turn Type	Prot		pm+ov	Prot	Prot		Perm	pm+pt		Perm	pm+pt	
Protected Phases	1	6	3	5	5	2		3	8		7	4
Permitted Phases			6				2	8		8		4
Actuated Green, G (s)	4.8	40.7	45.7		6.0	41.9	41.9	46.8	41.8	41.8	38.8	37.8
Effective Green, g (s)	4.8	42.0	48.0		6.0	43.2	43.2	50.0	44.0	44.0	42.0	40.0
Actuated g/C Ratio	0.04	0.38	0.44		0.05	0.39	0.39	0.45	0.40	0.40	0.38	0.36
Clearance Time (s)	4.0	5.3	5.0		4.0	5.3	5.3	5.0	6.2	6.2	5.0	6.2
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	4.2	4.2	3.0	3.6
Lane Grp Cap (vph)	69	1737	670		86	1787	556	166	1267	567	172	1152
v/s Ratio Prot	0.04	c0.52	0.02		c0.07	0.37		c0.05	0.26		0.00	0.30
v/s Ratio Perm			0.13				0.21	c0.38		0.04	0.02	
v/c Ratio	0.91	1.36	0.31		1.21	0.94	0.54	0.94	0.64	0.09	0.06	0.82
Uniform Delay, d1	52.4	34.0	20.2		52.0	32.1	25.7	24.7	26.6	20.6	21.9	31.7
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	78.2	166.3	0.3		163.7	11.0	3.7	51.7	1.3	0.1	0.1	4.9
Delay (s)	130.6	200.3	20.5		215.7	43.1	29.4	76.4	27.9	20.7	22.0	36.7
Level of Service	F	F	C		F	D	C	E	C	C	C	D
Approach Delay (s)		183.0				48.8			33.9			35.6
Approach LOS		F				D			C			D

Intersection Summary

HCM Average Control Delay	95.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	7
Ideal Flow (vphpl)	1700
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1417
Flt Permitted	1.00
Satd. Flow (perm)	1417
Volume (vph)	58
Peak-hour factor, PHF	0.97
Adj. Flow (vph)	60
RTOR Reduction (vph)	10
Lane Group Flow (vph)	50
Turn Type	pm+ov
Protected Phases	1
Permitted Phases	4
Actuated Green, G (s)	42.6
Effective Green, g (s)	44.8
Actuated g/C Ratio	0.41
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	577
v/s Ratio Prot	0.00
v/s Ratio Perm	0.03
v/c Ratio	0.09
Uniform Delay, d1	20.0
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	20.1
Level of Service	C
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑			↑↑↑	↔	↔	↔↔↔	↔			
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.91			0.86	1.00	0.86	0.81	0.86			
Frt	1.00	1.00			1.00	0.85	1.00	0.95	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.98	1.00			
Satd. Flow (prot)	3072	4550			5733	1417	1362	3756	1218			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.98	1.00			
Satd. Flow (perm)	3072	4550			5733	1417	1362	3756	1218			
Volume (vph)	576	1929	0	0	1608	282	877	240	745	0	0	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	588	1968	0	0	1641	288	895	245	760	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	167	0	10	10	0	0	0
Lane Group Flow (vph)	588	1968	0	0	1641	121	448	1062	370	0	0	0
Turn Type	Prot						Perm	Split	Perm			
Protected Phases	1	6					2	4	4			
Permitted Phases							2			4		
Actuated Green, G (s)	36.0	74.0					34.0	34.0	35.2	35.2	35.2	
Effective Green, g (s)	36.0	75.0					35.0	35.0	37.0	37.0	37.0	
Actuated g/C Ratio	0.30	0.62					0.29	0.29	0.31	0.31	0.31	
Clearance Time (s)	4.0	5.0					5.0	5.0	5.8	5.8	5.8	
Vehicle Extension (s)	3.0	3.0					3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	922	2844					1672	413	420	1158	376	
v/s Ratio Prot	0.19	c0.43					c0.29		c0.33	0.28		
v/s Ratio Perm								0.09			0.30	
v/c Ratio	0.64	0.69					0.98	0.29	1.07	0.98dl	0.98	
Uniform Delay, d1	36.4	14.9					42.2	32.9	41.5	40.0	41.2	
Progression Factor	0.89	1.01					1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	0.1					18.0	1.8	62.8	11.3	41.6	
Delay (s)	32.4	15.2					60.2	34.7	104.3	51.3	82.8	
Level of Service	C	B					E	C	F	D	F	
Approach Delay (s)	19.2						56.4		70.1		0.0	
Approach LOS	B						E		E		A	

Intersection Summary

HCM Average Control Delay	45.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	118.2%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑		↑↑	↑↑↑					↑	↑↑	↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.81		0.97	0.91					0.91	0.86	0.91
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6512		3072	4550					1441	2733	1289
Flt Permitted		1.00		0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6512		3072	4550					1441	2733	1289
Volume (vph)	0	1413	435	696	1782	0	0	0	0	1107	283	567
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1442	444	710	1818	0	0	0	0	1130	289	579
RTOR Reduction (vph)	0	46	0	0	0	0	0	0	0	0	8	15
Lane Group Flow (vph)	0	1840	0	710	1818	0	0	0	0	565	972	438
Turn Type				Prot						Split		Perm
Protected Phases		2		1	6					4	4	
Permitted Phases												4
Actuated Green, G (s)		40.3		30.5	75.3					35.0	35.0	35.0
Effective Green, g (s)		41.0		31.0	76.0					36.0	36.0	36.0
Actuated g/C Ratio		0.34		0.26	0.63					0.30	0.30	0.30
Clearance Time (s)		4.7		4.5	4.7					5.0	5.0	5.0
Vehicle Extension (s)		3.0		4.0	3.0					4.0	4.0	4.0
Lane Grp Cap (vph)		2225		794	2882					432	820	387
v/s Ratio Prot		c0.28		c0.23	0.40					c0.39	0.36	
v/s Ratio Perm												0.34
v/c Ratio		0.83		0.89	0.63					1.31	1.28dl	1.13
Uniform Delay, d1		36.2		42.9	13.4					42.0	42.0	42.0
Progression Factor		1.00		0.89	0.49					1.00	1.00	1.00
Incremental Delay, d2		3.7		3.8	0.3					154.4	95.5	86.3
Delay (s)		39.9		42.0	6.9					196.4	137.5	128.3
Level of Service		D		D	A					F	F	F
Approach Delay (s)		39.9			16.7			0.0			152.0	
Approach LOS		D			B			A			F	

Intersection Summary

HCM Average Control Delay	65.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	118.2%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	0.99		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.99			0.94			0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1583	1625		1583	1649			1531			1619	
Flt Permitted	0.20	1.00		0.12	1.00			0.95			0.87	
Satd. Flow (perm)	332	1625		208	1649			1466			1417	
Volume (vph)	46	1004	128	281	704	34	77	294	294	18	72	10
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	46	1004	128	281	704	34	77	294	294	18	72	10
RTOR Reduction (vph)	0	7	0	0	3	0	0	47	0	0	7	0
Lane Group Flow (vph)	46	1125	0	281	735	0	0	618	0	0	93	0
Conf. Peds. (#/hr)	19		23	23		19	17		16	16		17
Conf. Bikes (#/hr)			9			39			2			10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	32.0	32.0		32.0	32.0			20.0			20.0	
Effective Green, g (s)	32.0	32.0		32.0	32.0			20.0			20.0	
Actuated g/C Ratio	0.53	0.53		0.53	0.53			0.33			0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	177	867		111	879			489			472	
v/s Ratio Prot		0.69			0.45							
v/s Ratio Perm	0.14			c1.35				c0.42			0.07	
v/c Ratio	0.26	1.30		2.53	0.84			1.26			0.20	
Uniform Delay, d1	7.6	14.0		14.0	11.8			20.0			14.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	3.5	142.2		715.0	9.3			134.0			0.2	
Delay (s)	11.1	156.2		729.0	21.1			154.0			14.5	
Level of Service	B	F		F	C			F			B	
Approach Delay (s)		150.5			216.3			154.0			14.5	
Approach LOS		F			F			F			B	

Intersection Summary

HCM Average Control Delay	169.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.04		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	144.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↗		↖	↕↕↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4537		1583	4508		1583	1618		1583	1584	
Flt Permitted	0.06	1.00		0.12	1.00		0.27	1.00		0.49	1.00	
Satd. Flow (perm)	102	4537		201	4508		458	1618		809	1584	
Volume (vph)	75	1452	28	27	1812	119	87	142	34	148	190	94
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	1578	30	29	1970	129	95	154	37	161	207	102
RTOR Reduction (vph)	0	1	0	0	5	0	0	8	0	0	9	0
Lane Group Flow (vph)	82	1607	0	29	2094	0	95	183	0	161	300	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			2			4			4		
Permitted Phases	2			2			4			4		
Actuated Green, G (s)	82.9	82.9		82.9	82.9		27.7	27.7		27.7	27.7	
Effective Green, g (s)	83.3	83.3		83.3	83.3		28.7	28.7		28.7	28.7	
Actuated g/C Ratio	0.69	0.69		0.69	0.69		0.24	0.24		0.24	0.24	
Clearance Time (s)	4.4	4.4		4.4	4.4		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	71	3149		140	3129		110	387		193	379	
v/s Ratio Prot		0.35			0.46			0.11			0.19	
v/s Ratio Perm	c0.80			0.14			c0.21			0.20		
v/c Ratio	1.15	0.51		0.21	0.67		0.86	0.47		0.83	0.79	
Uniform Delay, d1	18.4	8.7		6.6	10.5		43.8	39.2		43.4	42.8	
Progression Factor	1.19	0.47		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	107.2	0.2		3.3	1.2		46.0	0.9		25.5	10.8	
Delay (s)	129.0	4.3		9.9	11.6		89.7	40.1		68.9	53.6	
Level of Service	F	A		A	B		F	D		E	D	
Approach Delay (s)		10.4			11.6			56.6			58.8	
Approach LOS		B			B			E			E	

Intersection Summary

HCM Average Control Delay	18.8	HCM Level of Service	B
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑	↗	↖↗	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1583	4550	3167	1417	3072	1417
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1583	4550	3167	1417	3072	1417
Volume (vph)	280	1504	1179	698	721	282
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	301	1617	1268	751	775	303
RTOR Reduction (vph)	0	0	0	14	0	8
Lane Group Flow (vph)	301	1617	1268	737	775	295
Turn Type	Prot			pm+ov		pt+ov
Protected Phases	5	2	6	4	4	4 5
Permitted Phases				6		
Actuated Green, G (s)	12.5	40.8	37.3	66.5	29.2	45.3
Effective Green, g (s)	12.0	40.7	37.2	66.0	28.8	44.8
Actuated g/C Ratio	0.13	0.45	0.41	0.73	0.32	0.50
Clearance Time (s)	3.5	3.9	3.9	3.6	3.6	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	211	2058	1309	1102	983	705
v/s Ratio Prot	c0.19	c0.36	c0.40	0.21	c0.25	0.21
v/s Ratio Perm				0.31		
v/c Ratio	1.43	0.79	0.97	0.67	0.79	0.42
Uniform Delay, d1	39.0	20.9	25.8	6.3	27.8	14.3
Progression Factor	1.00	1.00	0.58	0.40	1.00	1.00
Incremental Delay, d2	217.2	3.1	3.1	0.1	4.3	0.4
Delay (s)	256.2	24.1	18.0	2.7	32.1	14.7
Level of Service	F	C	B	A	C	B
Approach Delay (s)		60.5	12.3		27.2	
Approach LOS		E	B		C	

Intersection Summary

HCM Average Control Delay	33.9	HCM Level of Service	C
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3014		1509	3018	1426	
Flt Permitted	1.00		0.31	1.00	0.98	
Satd. Flow (perm)	3014		487	3018	1426	
Volume (vph)	860	8	32	1616	23	40
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	869	8	32	1632	23	40
RTOR Reduction (vph)	0	0	0	0	34	0
Lane Group Flow (vph)	877	0	32	1632	29	0
Turn Type			Perm			
Protected Phases	2			6	4	
Permitted Phases			6			
Actuated Green, G (s)	77.1		77.1	77.1	14.9	
Effective Green, g (s)	76.6		76.6	76.6	15.4	
Actuated g/C Ratio	0.77		0.77	0.77	0.15	
Clearance Time (s)	3.5		3.5	3.5	4.5	
Vehicle Extension (s)	0.2		0.2	0.2	3.0	
Lane Grp Cap (vph)	2309		373	2312	220	
v/s Ratio Prot	0.29			c0.54	c0.02	
v/s Ratio Perm			0.07			
v/c Ratio	0.38		0.09	0.71	0.13	
Uniform Delay, d1	3.9		2.9	6.0	36.5	
Progression Factor	2.74		0.27	0.20	1.00	
Incremental Delay, d2	0.1		0.3	1.3	0.3	
Delay (s)	10.7		1.1	2.5	36.8	
Level of Service	B		A	A	D	
Approach Delay (s)	10.7			2.5	36.8	
Approach LOS	B			A	D	
Intersection Summary						
HCM Average Control Delay			6.1		HCM Level of Service	A
HCM Volume to Capacity ratio			0.61			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			66.6%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	EBR2	NBT	NBR	NBR2	SBL2	SBL	SBT	NWR2
Lane Configurations											
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0					4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95					0.95	1.00
Frt	1.00	1.00	0.85	0.85	0.95					1.00	0.86
Flt Protected	0.95	1.00	1.00	1.00	1.00					0.98	1.00
Satd. Flow (prot)	1583	3167	1417	1417	3005					3110	1442
Flt Permitted	0.95	1.00	1.00	1.00	1.00					0.64	1.00
Satd. Flow (perm)	1583	3167	1417	1417	3005					2023	1442
Volume (vph)	55	649	267	10	300	121	33	106	53	278	14
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	59	690	284	11	319	129	35	113	56	296	15
RTOR Reduction (vph)	0	0	0	11	5	0	0	0	0	0	0
Lane Group Flow (vph)	59	690	284	0	478	0	0	0	0	465	15
Turn Type	custom		Perm	Perm					Prot		Free
Protected Phases	3	3			6				2	1	
Permitted Phases	4	4	3	3						2	Free
Actuated Green, G (s)	25.0	25.0	5.0	5.0	22.5					34.9	100.0
Effective Green, g (s)	23.6	23.6	4.0	4.0	22.5					33.9	100.0
Actuated g/C Ratio	0.24	0.24	0.04	0.04	0.22					0.34	1.00
Clearance Time (s)	3.0	3.0	3.0	3.0	4.0					4.0	
Vehicle Extension (s)	1.0	1.0	1.0	1.0	3.0					4.0	
Lane Grp Cap (vph)	437	874	57	57	676					903	1442
v/s Ratio Prot	0.01	c0.03			c0.16					c0.10	
v/s Ratio Perm	0.03	0.19	c0.20	0.00						c0.07	0.01
v/c Ratio	0.14	0.79	4.98	0.01	0.71					0.51	0.01
Uniform Delay, d1	30.3	35.9	48.0	46.1	35.7					26.5	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00					0.27	1.00
Incremental Delay, d2	0.1	4.4	1830.8	0.0	6.1					1.9	0.0
Delay (s)	30.4	40.3	1878.8	46.1	41.8					9.0	0.0
Level of Service	C	D	F	D	D					A	A
Approach Delay (s)		539.9			41.8					9.0	
Approach LOS		F			D					A	

Intersection Summary

HCM Average Control Delay	293.0	HCM Level of Service	F
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↑↑	↗		↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95	1.00		0.95	1.00
Fr _t	1.00	0.98		1.00	0.99			1.00	0.85		1.00	0.85
Fl _t Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.99	1.00
Satd. Flow (prot)	1583	4445		1583	4494			3140	1417		3149	1417
Fl _t Permitted	0.12	1.00		0.95	1.00			0.55	1.00		0.54	1.00
Satd. Flow (perm)	200	4445		1583	4494			1745	1417		1710	1417
Volume (vph)	454	1404	256	66	1408	125	184	886	137	94	732	113
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	478	1478	269	69	1482	132	194	933	144	99	771	119
RTOR Reduction (vph)	0	28	0	0	12	0	0	0	90	0	0	16
Lane Group Flow (vph)	478	1719	0	69	1602	0	0	1127	54	0	870	103
Turn Type	Perm		Prot		Perm		Perm	Perm	Perm	Perm		Perm
Protected Phases	6		5		2		8		4		4	
Permitted Phases	6						8		4		4	
Actuated Green, G (s)	37.7	37.7		6.3	48.0			33.5	33.5		33.5	33.5
Effective Green, g (s)	37.7	37.7		6.3	48.0			34.0	34.0		34.0	34.0
Actuated g/C Ratio	0.42	0.42		0.07	0.53			0.38	0.38		0.38	0.38
Clearance Time (s)	4.0	4.0		4.0	4.0			4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	84	1862		111	2397			659	535		646	535
v/s Ratio Prot		0.39		0.04	c0.36							
v/s Ratio Perm	c2.39							c0.65	0.04		0.51	0.07
v/c Ratio	5.69	0.92		0.62	0.67			1.71	0.10		1.35	0.19
Uniform Delay, d ₁	26.1	24.8		40.7	15.2			28.0	18.1		28.0	18.8
Progression Factor	1.45	1.46		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d ₂	2125.4	5.7		10.3	1.5			326.0	0.4		166.2	0.8
Delay (s)	2163.3	41.9		51.0	16.7			354.0	18.5		194.2	19.6
Level of Service	F	D		D	B			F	B		F	B
Approach Delay (s)		497.7			18.1			316.0			173.2	
Approach LOS		F			B			F			F	

Intersection Summary

HCM Average Control Delay	277.4	HCM Level of Service	F
HCM Volume to Capacity ratio	3.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	134.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: 6th St & Western Ave

2/23/2010

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕			↕↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0			4.0			4.0	4.0
Lane Util. Factor		0.95			0.95			0.95			0.95	1.00
Frbp, ped/bikes		0.99			0.96			0.99			1.00	0.75
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		0.99			0.98			0.99			1.00	0.85
Flt Protected		1.00			1.00			1.00			1.00	1.00
Satd. Flow (prot)		3116			2982			3110			3167	1066
Flt Permitted		1.00			1.00			1.00			1.00	1.00
Satd. Flow (perm)		3116			2982			3110			3167	1066
Volume (vph)	0	1225	77	0	1188	176	0	1597	98	0	1741	112
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	1276	80	0	1238	183	0	1664	102	0	1814	117
RTOR Reduction (vph)	0	1	0	0	2	0	0	5	0	0	0	6
Lane Group Flow (vph)	0	1355	0	0	1419	0	0	1761	0	0	1814	111
Conf. Peds. (#/hr)	136		73	73		136	120		104	120		104
Conf. Bikes (#/hr)			5			7			19			15
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)		40.2			40.2			40.2			40.2	40.2
Effective Green, g (s)		41.0			41.0			41.0			41.0	41.0
Actuated g/C Ratio		0.46			0.46			0.46			0.46	0.46
Clearance Time (s)		4.8			4.8			4.8			4.8	4.8
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1420			1358			1417			1443	486
v/s Ratio Prot		0.43			c0.48			0.57			c0.57	
v/s Ratio Perm												0.10
v/c Ratio		0.95			1.04			1.24			1.26	0.23
Uniform Delay, d1		23.6			24.5			24.5			24.5	14.9
Progression Factor		1.00			1.00			0.64			1.00	1.00
Incremental Delay, d2		15.2			37.0			109.9			121.5	1.1
Delay (s)		38.8			61.5			125.5			146.0	16.0
Level of Service		D			E			F			F	B
Approach Delay (s)		38.8			61.5			125.5			138.1	
Approach LOS		D			E			F			F	
Intersection Summary												
HCM Average Control Delay			97.0									F
HCM Volume to Capacity ratio			1.15									
Actuated Cycle Length (s)			90.0								8.0	
Intersection Capacity Utilization			124.5%									H
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↗		↖	↕↕↗		↖	↕↕		↖	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.97		1.00	0.97		1.00	0.96		1.00	0.92	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4387		1583	4343		1583	2979		1583	2800	
Flt Permitted	0.14	1.00		0.14	1.00		0.13	1.00		0.13	1.00	
Satd. Flow (perm)	234	4387		236	4343		212	2979		224	2800	
Volume (vph)	340	1245	94	118	1561	135	138	1517	186	105	1131	341
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	370	1353	102	128	1697	147	150	1649	202	114	1229	371
RTOR Reduction (vph)	0	10	0	0	11	0	0	10	0	0	31	0
Lane Group Flow (vph)	370	1445	0	128	1833	0	150	1841	0	114	1569	0
Conf. Peds. (#/hr)	663		371	371		663	453		618	618		453
Conf. Bikes (#/hr)			12			12			20			20
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	35.1	27.1		34.5	26.8		38.2	30.2		35.0	28.6	
Effective Green, g (s)	36.5	28.5		35.9	28.2		39.4	31.4		36.2	29.8	
Actuated g/C Ratio	0.41	0.32		0.40	0.31		0.44	0.35		0.40	0.33	
Clearance Time (s)	4.0	5.4		4.0	5.4		4.0	5.2		4.0	5.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	215	1389		209	1361		215	1039		187	927	
v/s Ratio Prot	c0.15	0.33		0.05	0.42		c0.06	c0.62		0.04	0.56	
v/s Ratio Perm	c0.55			0.19			0.24			0.20		
v/c Ratio	1.72	1.04		0.61	1.35		0.70	1.77		0.61	1.69	
Uniform Delay, d1	43.2	30.8		20.7	30.9		41.3	29.3		22.3	30.1	
Progression Factor	1.89	0.97		0.77	0.86		0.79	1.00		1.63	1.50	
Incremental Delay, d2	329.4	24.5		3.8	159.7		4.7	349.3		0.5	312.2	
Delay (s)	411.2	54.3		19.7	186.3		37.2	378.7		36.8	357.5	
Level of Service	F	D		B	F		D	F		D	F	
Approach Delay (s)		126.7			175.5			353.1			336.1	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	247.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	133.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: 8th St & Western Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3134		1583	3118		1583	3164		1583	3153	
Flt Permitted	0.26	1.00		0.32	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	440	3134		526	3118		163	3164		163	3153	
Volume (vph)	51	594	44	95	661	75	64	1454	9	104	1564	45
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	54	632	47	101	703	80	68	1547	10	111	1664	48
RTOR Reduction (vph)	0	4	0	0	5	0	0	1	0	0	2	0
Lane Group Flow (vph)	54	675	0	101	778	0	68	1556	0	111	1710	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	8			4			6			2		
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	40.4	40.4		40.4	40.4		40.3	40.3		40.3	40.3	
Effective Green, g (s)	41.0	41.0		41.0	41.0		41.0	41.0		41.0	41.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46		0.46	0.46		0.46	0.46	
Clearance Time (s)	4.6	4.6		4.6	4.6		4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	200	1428		240	1420		74	1441		74	1436	
v/s Ratio Prot		0.22			c0.25			0.49			0.54	
v/s Ratio Perm	0.12			0.19			0.42			c0.68		
v/c Ratio	0.27	0.47		0.42	0.55		0.92	1.08		1.50	1.19	
Uniform Delay, d1	15.2	17.0		16.5	17.8		22.9	24.5		24.5	24.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.43	0.42	
Incremental Delay, d2	3.3	1.1		5.3	1.5		83.7	48.6		231.4	86.5	
Delay (s)	18.5	18.1		21.8	19.3		106.6	73.1		241.8	96.7	
Level of Service	B	B		C	B		F	E		F	F	
Approach Delay (s)		18.2			19.6			74.5			105.6	
Approach LOS		B			B			E			F	

Intersection Summary

HCM Average Control Delay	67.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	103.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗		↗	↗↗	↗	↗	↗↗	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4534		1583	4475		1583	3167	1417	1583	3167	1417
Flt Permitted	0.12	1.00		0.12	1.00		0.12	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	196	4534		193	4475		194	3167	1417	194	3167	1417
Volume (vph)	55	2064	50	98	1526	188	203	1231	83	183	1347	156
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	56	2085	51	99	1541	190	205	1243	84	185	1361	158
RTOR Reduction (vph)	0	3	0	0	15	0	0	0	17	0	0	15
Lane Group Flow (vph)	56	2133	0	99	1716	0	205	1243	67	185	1361	143
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases	6			2			8		8	4		4
Actuated Green, G (s)	40.1	33.0		41.1	33.5		41.4	33.4	41.0	41.4	33.4	40.5
Effective Green, g (s)	41.1	34.0		42.1	34.5		42.4	34.4	42.0	42.4	34.4	41.5
Actuated g/C Ratio	0.41	0.34		0.42	0.34		0.42	0.34	0.42	0.42	0.34	0.42
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	179	1542		187	1544		193	1089	652	193	1089	645
v/s Ratio Prot	0.02	c0.47		c0.04	0.38		c0.08	0.39	0.01	0.08	c0.43	0.02
v/s Ratio Perm	0.11			0.18			0.37		0.04	0.33		0.09
v/c Ratio	0.31	1.38		0.53	1.11		1.06	1.14	0.10	0.96	1.25	0.22
Uniform Delay, d1	22.9	33.0		23.8	32.8		48.2	32.8	17.6	24.5	32.8	18.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	176.7		2.7	59.9		82.2	75.0	0.1	52.2	120.1	0.2
Delay (s)	23.9	209.7		26.5	92.6		130.4	107.8	17.7	76.8	152.9	19.0
Level of Service	C	F		C	F		F	F	B	E	F	B
Approach Delay (s)		204.9			89.0			105.9			132.2	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	137.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	119.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4516		1583	4504		1583	3123		1583	3104	
Flt Permitted	0.09	1.00		0.09	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	145	4516		145	4504		185	3123		185	3104	
Volume (vph)	274	2096	109	114	1720	124	76	1155	117	89	1464	222
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	280	2139	111	116	1755	127	78	1179	119	91	1494	227
RTOR Reduction (vph)	0	3	0	0	9	0	0	2	0	0	6	0
Lane Group Flow (vph)	280	2247	0	116	1873	0	78	1296	0	91	1715	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	6			2			8			4		
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	45.5	45.5		45.5	45.5		35.5	35.5		35.5	35.5	
Effective Green, g (s)	46.0	46.0		46.0	46.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.40	0.40		0.40	0.40	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	2308		74	2302		74	1249		74	1242	
v/s Ratio Prot		0.50			0.42			0.42			0.55	
v/s Ratio Perm	c1.93			0.80			0.42			0.49		
v/c Ratio	3.78	0.97		1.57	0.81		1.05	1.04		1.23	1.38	
Uniform Delay, d1	22.0	21.4		22.0	18.4		27.0	27.0		27.0	27.0	
Progression Factor	1.24	1.29		1.17	1.19		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1274.5	10.3		261.3	0.3		120.3	35.8		178.7	176.5	
Delay (s)	1301.8	38.0		287.0	22.2		147.3	62.8		205.7	203.5	
Level of Service	F	D		F	C		F	E		F	F	
Approach Delay (s)		177.8			37.5			67.6			203.6	
Approach LOS		F			D			E			F	

Intersection Summary

HCM Average Control Delay	127.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	132.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↑	↗		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)	1583	4539		1583	4538			1643	1417		1546	
Flt Permitted	0.08	1.00		0.06	1.00			0.89	1.00		0.91	
Satd. Flow (perm)	126	4539		98	4538			1484	1417		1425	
Volume (vph)	56	2288	39	78	1837	34	27	66	91	28	37	54
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	61	2487	42	85	1997	37	29	72	99	30	40	59
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	3	0	8	0
Lane Group Flow (vph)	61	2528	0	85	2033	0	0	101	96	0	121	0
Turn Type	Perm			Perm			Perm			Perm	Perm	
Protected Phases	6			2			8			8	4	
Permitted Phases	6			2			8			8	4	
Actuated Green, G (s)	67.7	67.7		67.7	67.7			13.8	13.8		13.8	
Effective Green, g (s)	67.7	67.7		67.7	67.7			14.3	14.3		14.3	
Actuated g/C Ratio	0.75	0.75		0.75	0.75			0.16	0.16		0.16	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.5	4.5		4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	95	3414		74	3414			236	225		226	
v/s Ratio Prot		0.56			0.45							
v/s Ratio Perm	0.49			c0.86				0.07	0.07		c0.09	
v/c Ratio	0.64	0.74		1.15	0.60			0.43	0.43		0.54	
Uniform Delay, d1	5.3	6.2		11.1	5.0			34.2	34.2		34.8	
Progression Factor	1.00	1.00		1.27	0.93			1.00	1.00		1.00	
Incremental Delay, d2	28.8	1.5		118.0	0.4			1.2	1.3		2.4	
Delay (s)	34.2	7.7		132.1	5.0			35.4	35.5		37.3	
Level of Service	C	A		F	A			D	D		D	
Approach Delay (s)		8.3			10.1			35.4			37.3	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵↵↵	↵
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.91
Frbp, ped/bikes	0.96		1.00	1.00	0.98	0.96
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	0.95	0.85
Flt Protected	1.00		0.95	1.00	0.97	1.00
Satd. Flow (prot)	4247		1583	4550	2916	1238
Flt Permitted	1.00		0.09	1.00	0.97	1.00
Satd. Flow (perm)	4247		150	4550	2916	1238
Volume (vph)	1803	442	594	1420	593	716
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1840	451	606	1449	605	731
RTOR Reduction (vph)	46	0	0	0	72	1
Lane Group Flow (vph)	2245	0	606	1449	832	431
Conf. Peds. (#/hr)		184	184			22
Conf. Bikes (#/hr)		4				5
Turn Type			pm+pt		pm+ov	
Protected Phases	6		5	2	4	5
Permitted Phases			2			4
Actuated Green, G (s)	39.5		51.5	51.5	28.8	36.8
Effective Green, g (s)	40.5		52.5	52.5	29.5	37.5
Actuated g/C Ratio	0.45		0.58	0.58	0.33	0.42
Clearance Time (s)	5.0		4.0	5.0	4.7	4.0
Vehicle Extension (s)	3.0		2.0	3.0	2.0	2.0
Lane Grp Cap (vph)	1911		215	2654	956	571
v/s Ratio Prot	0.53		c0.25	0.32	c0.29	0.07
v/s Ratio Perm			c1.40			0.28
v/c Ratio	1.17		2.82	0.55	0.87	0.76
Uniform Delay, d1	24.8		26.5	11.5	28.5	22.3
Progression Factor	1.00		1.00	1.00	0.68	0.34
Incremental Delay, d2	84.5		831.1	0.8	6.0	3.5
Delay (s)	109.2		857.6	12.3	25.3	11.1
Level of Service	F		F	B	C	B
Approach Delay (s)	109.2			261.6	20.7	
Approach LOS	F			F	C	

Intersection Summary

HCM Average Control Delay	143.5	HCM Level of Service	F
HCM Volume to Capacity ratio	2.07		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	126.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↖	↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3059		1583	1667	1417	1583	3115		1583	3163	
Flt Permitted	0.47	1.00		0.36	1.00	1.00	0.23	1.00		0.11	1.00	
Satd. Flow (perm)	777	3059		599	1667	1417	388	3115		184	3163	
Volume (vph)	20	370	109	185	245	59	178	1266	153	20	970	8
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	20	378	111	189	250	60	182	1292	156	20	990	8
RTOR Reduction (vph)	0	0	0	0	0	42	0	10	0	0	1	0
Lane Group Flow (vph)	20	489	0	189	250	18	182	1438	0	20	997	0
Turn Type	Perm			Perm			Perm	Perm		Perm		
Protected Phases	8			4			4	6		2		
Permitted Phases	8			4			4	6		2		
Actuated Green, G (s)	26.4	26.4		26.4	26.4	26.4	54.3	54.3		54.3	54.3	
Effective Green, g (s)	27.0	27.0		27.0	27.0	27.0	55.0	55.0		55.0	55.0	
Actuated g/C Ratio	0.30	0.30		0.30	0.30	0.30	0.61	0.61		0.61	0.61	
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	233	918		180	500	425	237	1904		112	1933	
v/s Ratio Prot		0.16			0.15			0.46			0.32	
v/s Ratio Perm	0.03			c0.32		0.01	c0.47			0.11		
v/c Ratio	0.09	0.53		1.05	0.50	0.04	0.77	0.76		0.18	0.52	
Uniform Delay, d1	22.6	26.2		31.5	25.9	22.3	12.8	12.6		7.6	9.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.61	1.71		0.36	0.45	
Incremental Delay, d2	0.7	2.2		80.9	3.5	0.2	2.2	0.3		0.3	0.1	
Delay (s)	23.4	28.5		112.4	29.5	22.5	22.8	21.9		3.1	4.6	
Level of Service	C			F		C		C		A		A
Approach Delay (s)	28.3			60.1		22.0				4.6		
Approach LOS	C			E		C				A		

Intersection Summary

HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕↕↕		↗	↕↕↕		↗	↕↕		↗	↕↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4483		1583	4520		1583	3130		1583	3167	1417
Flt Permitted	0.14	1.00		0.95	1.00		0.13	1.00		0.13	1.00	1.00
Satd. Flow (perm)	238	4483		1583	4520		209	3130		216	3167	1417
Volume (vph)	70	2218	242	78	1676	77	91	1446	121	72	1183	154
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	2335	255	82	1764	81	96	1522	127	76	1245	162
RTOR Reduction (vph)	0	14	0	0	5	0	0	6	0	0	0	100
Lane Group Flow (vph)	74	2576	0	82	1840	0	96	1643	0	76	1245	62
Turn Type	pm+pt		Prot		pm+pt		pm+pt		pm+pt		Perm	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2						4			8		8
Actuated Green, G (s)	32.4	27.1		8.2	29.1		38.3	30.9		36.3	29.9	29.9
Effective Green, g (s)	33.7	28.0		7.7	30.0		39.3	31.9		37.3	30.9	30.9
Actuated g/C Ratio	0.37	0.31		0.09	0.33		0.44	0.35		0.41	0.34	0.34
Clearance Time (s)	4.4	4.9		3.5	4.9		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	174	1395		135	1507		204	1109		187	1087	487
v/s Ratio Prot	0.03	c0.57		c0.05	0.41		c0.04	c0.52		0.03	0.39	
v/s Ratio Perm	0.13						0.17			0.14		0.04
v/c Ratio	0.43	1.85		0.61	1.22		0.47	1.48		0.41	1.15	0.13
Uniform Delay, d1	22.8	31.0		39.7	30.0		20.6	29.1		21.5	29.6	20.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.93	0.80	0.72
Incremental Delay, d2	1.7	383.6		7.5	105.6		1.7	221.4		1.2	75.2	0.5
Delay (s)	24.5	414.6		47.2	135.6		22.3	250.4		21.3	98.9	15.1
Level of Service	C			D			C			C		B
Approach Delay (s)	403.8			131.8			237.9			85.8		
Approach LOS	F			F			F			F		

Intersection Summary

HCM Average Control Delay	239.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	125.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↑	↗		↖	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.99	1.00
Satd. Flow (prot)	1583	4517		1583	4534			1643	1417		1645	1417
Flt Permitted	0.09	1.00		0.09	1.00			0.99	1.00		0.99	1.00
Satd. Flow (perm)	147	4517		147	4534			1643	1417		1645	1417
Volume (vph)	72	2082	105	6	1865	44	80	203	42	63	177	37
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	79	2288	115	7	2049	48	88	223	46	69	195	41
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	36	0	0	36
Lane Group Flow (vph)	79	2403	0	7	2095	0	0	311	10	0	264	5
Turn Type	Perm		Perm		Split		Perm		Split		Perm	
Protected Phases	6		2		4		4		3		3	
Permitted Phases	6		2				4				3	
Actuated Green, G (s)	43.6	43.6		43.6	43.6			19.0	19.0		10.5	10.5
Effective Green, g (s)	45.5	45.5		45.5	45.5			20.5	20.5		12.0	12.0
Actuated g/C Ratio	0.51	0.51		0.51	0.51			0.23	0.23		0.13	0.13
Clearance Time (s)	5.9	5.9		5.9	5.9			5.5	5.5		5.5	5.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	74	2284		74	2292			374	323		219	189
v/s Ratio Prot		0.53			0.46			c0.19			c0.16	
v/s Ratio Perm	c0.54			0.05				0.01				0.00
v/c Ratio	1.07	1.05		0.09	0.91			0.83	0.03		1.21	0.03
Uniform Delay, d1	22.2	22.2		11.6	20.4			33.1	27.0		39.0	33.9
Progression Factor	0.67	0.67		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	115.0	32.9		2.5	7.0			14.5	0.0		127.4	0.1
Delay (s)	129.8	47.9		14.1	27.5			47.6	27.1		166.4	34.0
Level of Service	F	D		B	C			D	C		F	C
Approach Delay (s)		50.5			27.5			45.0			148.6	
Approach LOS		D			C			D			F	

Intersection Summary

HCM Average Control Delay	46.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			1.00			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	1.00
Satd. Flow (prot)	1583	4543		1583	4541			1658			1655	1417
Flt Permitted	0.13	1.00		0.08	1.00			1.00			0.99	1.00
Satd. Flow (perm)	216	4543		126	4541			1658			1655	1417
Volume (vph)	169	1832	19	22	1395	19	4	273	10	17	101	175
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	176	1908	20	23	1453	20	4	284	10	18	105	182
RTOR Reduction (vph)	0	1	0	0	1	0	0	2	0	0	0	153
Lane Group Flow (vph)	176	1927	0	23	1472	0	0	296	0	0	123	29
Turn Type	Perm		Perm		Split		Split		Split		Perm	
Protected Phases	6		2		3		3		4		4	
Permitted Phases	6		2								4	
Actuated Green, G (s)	51.4	51.4		51.4	51.4			9.6			13.1	13.1
Effective Green, g (s)	52.9	52.9		52.9	52.9			11.0			14.1	14.1
Actuated g/C Ratio	0.59	0.59		0.59	0.59			0.12			0.16	0.16
Clearance Time (s)	5.5	5.5		5.5	5.5			5.4			5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	127	2670		74	2669			203			259	222
v/s Ratio Prot		0.42			0.32			c0.18			c0.07	
v/s Ratio Perm	c0.82			0.18								0.02
v/c Ratio	1.39	0.72		0.31	0.55			1.46			0.47	0.13
Uniform Delay, d1	18.6	13.3		9.4	11.3			39.5			34.6	32.7
Progression Factor	1.00	1.00		1.45	1.52			1.00			1.00	1.00
Incremental Delay, d2	214.8	1.7		4.5	0.3			231.8			1.4	0.3
Delay (s)	233.3	15.0		18.1	17.5			271.3			36.0	32.9
Level of Service	F	B		B	B			F			D	C
Approach Delay (s)		33.3			17.5			271.3			34.1	
Approach LOS		C			B			F			C	

Intersection Summary

HCM Average Control Delay	44.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: Wilshire Blvd & Sycamore Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↑	↑↑↑			↑			↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00	
Frbp, ped/bikes		0.99		1.00	1.00			0.99			0.98	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.99		1.00	1.00			0.97			0.93	
Flt Protected		1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		4230		1490	4267			1500			1436	
Flt Permitted		1.00		0.06	1.00			0.96			0.98	
Satd. Flow (perm)		4230		100	4267			1444			1408	
Volume (vph)	0	1937	71	45	1573	22	27	148	45	10	60	67
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	2129	78	49	1729	24	30	163	49	11	66	74
RTOR Reduction (vph)	0	3	0	0	1	0	0	4	0	0	13	0
Lane Group Flow (vph)	0	2204	0	49	1752	0	0	238	0	0	138	0
Conf. Peds. (#/hr)	34		71	71		34	15		9	9		15
Conf. Bikes (#/hr)			8			12			4			2
Turn Type				Perm			Perm				Perm	
Protected Phases		6			2			8				4
Permitted Phases				2			8			4		
Actuated Green, G (s)		63.5		63.5	63.5			19.0			19.0	
Effective Green, g (s)		63.0		63.0	63.0			19.0			19.0	
Actuated g/C Ratio		0.70		0.70	0.70			0.21			0.21	
Clearance Time (s)		3.5		3.5	3.5			4.0			4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		2961		70	2987			305			297	
v/s Ratio Prot		c0.52			0.41							
v/s Ratio Perm				0.49				c0.16			0.10	
v/c Ratio		0.74		0.70	0.59			0.78			0.47	
Uniform Delay, d1		8.5		7.9	6.9			33.5			31.1	
Progression Factor		0.98		1.00	1.00			1.00			1.00	
Incremental Delay, d2		0.2		45.0	0.9			12.2			1.2	
Delay (s)		8.4		52.9	7.7			45.7			32.2	
Level of Service		A		D	A			D			C	
Approach Delay (s)		8.4			9.0			45.7			32.2	
Approach LOS		A			A			D			C	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘	↑↑↑		↘	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2980	1333	1490	2957		1490	4253		1490	4237	
Flt Permitted	0.13	1.00	1.00	0.12	1.00		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	202	2980	1333	194	2957		216	4253		216	4237	
Volume (vph)	86	1504	102	120	1331	73	123	2175	106	156	2120	161
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	89	1551	105	124	1372	75	127	2242	109	161	2186	166
RTOR Reduction (vph)	0	0	35	0	4	0	0	6	0	0	9	0
Lane Group Flow (vph)	89	1551	70	124	1443	0	127	2345	0	161	2343	0
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases	8		8	4			6			2		
Actuated Green, G (s)	35.6	30.0	37.0	38.4	31.4		35.0	28.0		35.0	28.0	
Effective Green, g (s)	36.6	31.0	38.0	39.4	32.4		36.0	29.0		36.0	29.0	
Actuated g/C Ratio	0.41	0.34	0.42	0.44	0.36		0.40	0.32		0.40	0.32	
Clearance Time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	4.8	3.0	3.0	4.6		3.0	4.3		3.0	5.5	
Lane Grp Cap (vph)	162	1026	622	186	1065		185	1370		185	1365	
v/s Ratio Prot	0.03	c0.52	0.01	c0.05	0.49		0.05	0.55		c0.07	c0.55	
v/s Ratio Perm	0.19		0.04	0.24			0.22			0.28		
v/c Ratio	0.55	1.51	0.11	0.67	1.35		0.69	1.71		0.87	1.72	
Uniform Delay, d1	22.2	29.5	15.8	41.7	28.8		41.8	30.5		42.9	30.5	
Progression Factor	0.71	0.71	0.64	1.00	1.00		1.64	1.43		1.71	1.44	
Incremental Delay, d2	0.3	230.7	0.0	8.7	165.7		1.0	320.5		4.3	322.5	
Delay (s)	16.0	251.6	10.1	50.5	194.5		69.5	364.3		77.8	366.6	
Level of Service	B	F	B	D	F		E	F		E	F	
Approach Delay (s)		225.1			183.2			349.2			348.1	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	291.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	133.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗		↖	↗		↖	↗	↘
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2980	1333	1490	2919		1490	4218		1490	4279	
Flt Permitted	0.15	1.00	1.00	0.23	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	231	2980	1333	356	2919		165	4218		165	4279	
Volume (vph)	37	744	117	150	1033	165	154	2089	233	92	2124	10
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	37	752	118	152	1043	167	156	2110	235	93	2145	10
RTOR Reduction (vph)	0	0	22	0	1	0	0	15	0	0	1	0
Lane Group Flow (vph)	37	752	96	152	1209	0	156	2330	0	93	2154	0
Turn Type	Perm		Perm	pm+pt		Perm		Perm		Perm		
Protected Phases		8		7	4		6		6		2	
Permitted Phases	8		8	4		6		2				
Actuated Green, G (s)	35.0	35.0	35.0	43.0	43.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0
Effective Green, g (s)	36.0	36.0	36.0	44.0	44.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0
Actuated g/C Ratio	0.40	0.40	0.40	0.49	0.49	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Clearance Time (s)	5.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	92	1192	533	224	1427	70	1781	70	1807	70	1807	70
v/s Ratio Prot		0.25		0.03	c0.41		0.55		0.50		0.50	
v/s Ratio Perm	0.16		0.07	0.30		c0.94		0.56		0.56		
v/c Ratio	0.40	0.63	0.18	0.68	0.85	2.23	1.31	1.33	1.19	1.33	1.19	
Uniform Delay, d1	19.3	21.7	17.5	17.5	20.1	26.0	26.0	26.0	26.0	26.0	26.0	26.0
Progression Factor	1.41	1.43	1.68	1.00	1.00	1.00	1.00	0.34	0.35	0.34	0.35	
Incremental Delay, d2	1.2	0.2	0.1	7.9	6.4	596.1	142.9	156.7	87.1	156.7	87.1	
Delay (s)	28.4	31.3	29.4	25.4	26.5	622.1	168.9	165.5	96.1	165.5	96.1	
Level of Service	C	C	C	C	C	F	F	F	F	F	F	
Approach Delay (s)		30.9		26.4		197.1		98.9		98.9		
Approach LOS		C		C		F		F		F		

Intersection Summary

HCM Average Control Delay	111.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	124.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕↕		↕	↕↕↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.91		1.00	0.91	
Frt		0.99			0.98		1.00	1.00		1.00	1.00	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2954			2920		1490	4280		1490	4265	
Flt Permitted		1.00			1.00		0.19	1.00		0.19	1.00	
Satd. Flow (perm)		2954			2920		299	4280		299	4265	
Volume (vph)	0	1233	77	0	971	151	71	2353	10	105	2176	61
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1258	79	0	991	154	72	2401	10	107	2220	62
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	5	0
Lane Group Flow (vph)	0	1337	0	0	1145	0	72	2410	0	107	2277	0
Turn Type		Perm		Perm		Perm		Perm		Perm		
Protected Phases		8		4		4		6		6		2
Permitted Phases		8		4		4		6		6		2
Actuated Green, G (s)		30.1		30.1		30.1		20.3	20.3	20.3		20.3
Effective Green, g (s)		31.0		31.0		31.0		21.0	21.0	21.0		21.0
Actuated g/C Ratio		0.52		0.52		0.52		0.35	0.35	0.35		0.35
Clearance Time (s)		4.9		4.9		4.9		4.7	4.7	4.7		4.7
Vehicle Extension (s)		3.0		3.0		3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		1526		1509		1509		105	1498	105		1493
v/s Ratio Prot		c0.45		0.39		0.39		c0.56		c0.56		0.53
v/s Ratio Perm								0.24		0.36		
v/c Ratio		0.88		0.76		0.76		0.69	1.61	1.02		1.53
Uniform Delay, d1		12.8		11.5		11.5		16.7	19.5	19.5		19.5
Progression Factor		1.00		1.00		1.00		1.00	1.00	1.00		1.00
Incremental Delay, d2		6.0		2.2		2.2		30.7	277.2	93.1		239.9
Delay (s)		18.8		13.8		13.8		47.4	296.7	112.6		259.4
Level of Service		B		B		B		D	F	F		F
Approach Delay (s)		18.8		13.8		13.8		289.5		252.8		
Approach LOS		B		B		B		F		F		F

Intersection Summary

HCM Average Control Delay	185.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶		↶	↶↶↶		↶	↶↶↶	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.99		1.00	0.98		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1489	4168		1490	4154		1490	4243		1490	4202	
Flt Permitted	0.14	1.00		0.14	1.00		0.13	1.00		0.95	1.00	
Satd. Flow (perm)	216	4168		214	4154		202	4243		1490	4202	
Volume (vph)	120	1739	151	238	1298	132	129	2055	75	149	1924	110
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	122	1774	154	243	1324	135	132	2097	77	152	1963	112
RTOR Reduction (vph)	0	11	0	0	13	0	0	5	0	0	7	0
Lane Group Flow (vph)	122	1917	0	243	1446	0	132	2169	0	152	2068	0
Conf. Peds. (#/hr)	145		153	153		145	164		89	89		164
Conf. Bikes (#/hr)			13			8			6			17
Turn Type	pm+pt			pm+pt			pm+pt			Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8					
Actuated Green, G (s)	36.2	29.0		36.8	29.3		38.5	31.0		7.5	31.0	
Effective Green, g (s)	35.7	29.0		36.3	29.3		38.0	31.0		7.0	31.0	
Actuated g/C Ratio	0.40	0.32		0.40	0.33		0.42	0.34		0.08	0.34	
Clearance Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	180	1343		186	1352		185	1461		116	1447	
v/s Ratio Prot	0.05	c0.46		c0.10	0.35		0.06	c0.51		c0.10	0.49	
v/s Ratio Perm	0.22			0.43			0.24					
v/c Ratio	0.68	1.43		1.31	1.07		0.71	1.48		1.31	1.43	
Uniform Delay, d1	20.8	30.5		24.6	30.4		42.0	29.5		41.5	29.5	
Progression Factor	1.30	0.75		1.49	0.79		1.98	1.26		1.00	1.00	
Incremental Delay, d2	5.7	194.9		165.8	43.2		1.2	218.5		188.3	197.1	
Delay (s)	32.8	217.9		202.5	67.1		84.2	255.8		229.8	226.6	
Level of Service	C	F		F	E		F	F		F	F	
Approach Delay (s)		206.9			86.4			246.0			226.8	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	198.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	132.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↗↗↗		↗	↗↗↗	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1502			1511		1490	4263		1490	4249	
Flt Permitted		0.92			0.73		0.09	1.00		0.09	1.00	
Satd. Flow (perm)		1389			1122		143	4263		143	4249	
Volume (vph)	82	410	139	64	170	43	16	2118	40	19	2251	54
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	84	418	142	65	173	44	16	2161	41	19	2297	55
RTOR Reduction (vph)	0	1	0	0	1	0	0	2	0	0	3	0
Lane Group Flow (vph)	0	643	0	0	281	0	16	2200	0	19	2349	0
Conf. Peds. (#/hr)	10		12	12		10	57		25	25		57
Conf. Bikes (#/hr)			2						1			15
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		37.0			37.0		43.5	43.5		43.5	43.5	
Effective Green, g (s)		38.0			38.0		44.0	44.0		44.0	44.0	
Actuated g/C Ratio		0.42			0.42		0.49	0.49		0.49	0.49	
Clearance Time (s)		5.0			5.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		586			474		70	2084		70	2077	
v/s Ratio Prot								0.52			c0.55	
v/s Ratio Perm		c0.46			0.25		0.11			0.13		
v/c Ratio		1.10			0.59		0.23	1.06		0.27	1.13	
Uniform Delay, d1		26.0			20.0		13.2	23.0		13.6	23.0	
Progression Factor		1.00			1.00		1.00	1.00		0.31	0.60	
Incremental Delay, d2		66.8			2.0		7.5	36.3		0.9	59.7	
Delay (s)		92.8			22.0		20.7	59.3		5.1	73.5	
Level of Service		F			C		C	E		A	E	
Approach Delay (s)		92.8			22.0			59.1			72.9	
Approach LOS		F			C			E			E	

Intersection Summary

HCM Average Control Delay	67.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	107.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑↑		↖	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	4273		1490	4231		1490	4269		1490	4231	
Flt Permitted	0.12	1.00		0.11	1.00		0.95	1.00		0.11	1.00	
Satd. Flow (perm)	194	4273		171	4231		1490	4269		176	4231	
Volume (vph)	268	1925	29	52	1290	113	30	2149	47	194	2251	195
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	276	1985	30	54	1330	116	31	2215	48	200	2321	201
RTOR Reduction (vph)	0	1	0	0	10	0	0	2	0	0	8	0
Lane Group Flow (vph)	276	2014	0	54	1436	0	31	2261	0	200	2514	0
Turn Type	Perm		pm+pt			Prot		pm+pt				
Protected Phases	8		7		4		5		1			6
Permitted Phases	8		4					2		6		
Actuated Green, G (s)	31.3	31.3	41.8		41.8		5.2	30.2	47.4		38.2	
Effective Green, g (s)	32.7	32.7	43.2		43.2		5.2	31.6	48.8		39.6	
Actuated g/C Ratio	0.33	0.33	0.43		0.43		0.05	0.32	0.49		0.40	
Clearance Time (s)	5.4	5.4	4.0		5.4		4.0	5.4	4.0		5.4	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	4.0		3.0	
Lane Grp Cap (vph)	63	1397	160		1828		77	1349	259		1675	
v/s Ratio Prot	0.47		0.02		c0.34		0.02		c0.10			c0.59
v/s Ratio Perm	c1.42		0.12					c0.53		0.27		
v/c Ratio	4.38	1.44	0.34		0.79		0.40	1.68	0.77		1.50	
Uniform Delay, d1	33.6	33.6	45.4		24.4		45.9	34.2	24.0		30.2	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	1557.6	202.8	1.3		3.5		3.4	307.5	14.0		228.5	
Delay (s)	1591.2	236.4	46.6		27.9		49.3	341.7	38.0		258.7	
Level of Service	F		D			C		D	F	D		F
Approach Delay (s)	399.6		28.6			337.7		242.4				
Approach LOS	F		C			F		F			F	

Intersection Summary

HCM Average Control Delay	271.7	HCM Level of Service	F
HCM Volume to Capacity ratio	2.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	126.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑			↑↑↑			↑	↗		↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91			0.91			1.00	1.00		1.00	
Frbp, ped/bikes	1.00	0.97			0.99			1.00	0.96		0.99	
Flpb, ped/bikes	0.98	1.00			1.00			0.99	1.00		1.00	
Frt	1.00	0.99			0.99			1.00	0.85		0.98	
Flt Protected	0.95	1.00			1.00			0.99	1.00		0.99	
Satd. Flow (prot)	1467	4101			4206			1524	1280		1491	
Flt Permitted	0.11	1.00			1.00			0.81	1.00		0.72	
Satd. Flow (perm)	168	4101			4206			1253	1280		1084	
Volume (vph)	246	1800	194	0	1424	65	78	192	150	44	111	29
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	273	2000	216	0	1582	72	87	213	167	49	123	32
RTOR Reduction (vph)	0	12	0	0	5	0	0	0	4	0	8	0
Lane Group Flow (vph)	273	2204	0	0	1649	0	0	300	163	0	196	0
Confl. Peds. (#/hr)	95		113	113		95	73		22	22		73
Confl. Bikes (#/hr)			13			15			3			3
Turn Type	Perm			Perm			Perm		Perm		Perm	
Protected Phases	6			2			8		8		4	
Permitted Phases	6						8		8		4	
Actuated Green, G (s)	58.5	58.5			58.5			24.0	24.0		24.0	
Effective Green, g (s)	58.0	58.0			58.0			24.0	24.0		24.0	
Actuated g/C Ratio	0.64	0.64			0.64			0.27	0.27		0.27	
Clearance Time (s)	3.5	3.5			3.5			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	108	2643			2711			334	341		289	
v/s Ratio Prot		0.54			0.39							
v/s Ratio Perm	c1.63						c0.24		0.13		0.18	
v/c Ratio	2.53	0.83			0.61			0.90	0.48		0.68	
Uniform Delay, d1	16.0	12.3			9.4			31.8	27.7		29.5	
Progression Factor	1.24	1.17			0.27			1.00	1.00		1.00	
Incremental Delay, d2	707.2	2.4			0.1			25.3	1.1		6.2	
Delay (s)	727.1	16.8			2.6			57.1	28.8		35.7	
Level of Service	F	B			A			E	C		D	
Approach Delay (s)		94.7			2.6			47.0			35.7	
Approach LOS		F			A			D			D	

Intersection Summary			
HCM Average Control Delay	55.9	HCM Level of Service	E
HCM Volume to Capacity ratio	2.05		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑	↖		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.86	0.86		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.96			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.99	
Satd. Flow (prot)	1583	4537		1583	4300	1218		1590			1583	
Flt Permitted	0.11	1.00		0.08	1.00	1.00		0.89			0.79	
Satd. Flow (perm)	176	4537		128	4300	1218		1423			1264	
Volume (vph)	138	1787	35	72	1375	100	36	174	89	88	211	128
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	152	1964	38	79	1511	110	40	191	98	97	232	141
RTOR Reduction (vph)	0	2	0	0	0	46	0	7	0	0	17	0
Lane Group Flow (vph)	152	2000	0	79	1511	64	0	322	0	0	453	0
Turn Type	Perm			Perm			Perm	Perm			Perm	
Protected Phases	6			2			8	8			4	
Permitted Phases	6			2			8	8			4	
Actuated Green, G (s)	52.0	52.0		52.0	52.0	52.0		30.0			30.0	
Effective Green, g (s)	52.0	52.0		52.0	52.0	52.0		30.0			30.0	
Actuated g/C Ratio	0.58	0.58		0.58	0.58	0.58		0.33			0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	102	2621		74	2484	704		474			421	
v/s Ratio Prot		0.44			0.35							
v/s Ratio Perm	c0.86			0.62		0.05		0.23			c0.36	
v/c Ratio	1.49	0.76		1.07	0.61	0.09		0.68			1.08	
Uniform Delay, d1	19.0	14.3		19.0	12.4	8.5		25.9			30.0	
Progression Factor	1.89	2.03		0.93	0.76	0.54		1.00			1.00	
Incremental Delay, d2	253.4	1.5		112.1	0.9	0.2		4.0			65.5	
Delay (s)	289.2	30.6		129.8	10.3	4.8		29.9			95.5	
Level of Service	F	C		F	B	A		C			F	
Approach Delay (s)		48.9			15.5			29.9			95.5	
Approach LOS		D			B			C			F	

Intersection Summary

HCM Average Control Delay	40.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	1.00		1.00	1.00	0.95	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	4546		1583	4550	1531	
Flt Permitted	1.00		0.07	1.00	0.97	
Satd. Flow (perm)	4546		121	4550	1531	
Volume (vph)	1932	10	52	1464	77	51
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2034	11	55	1541	81	54
RTOR Reduction (vph)	0	0	0	0	4	0
Lane Group Flow (vph)	2045	0	55	1541	131	0
Turn Type			Perm			
Protected Phases	6			2	8	
Permitted Phases			2			
Actuated Green, G (s)	54.8		54.8	54.8	26.0	
Effective Green, g (s)	55.3		55.3	55.3	26.7	
Actuated g/C Ratio	0.61		0.61	0.61	0.30	
Clearance Time (s)	4.5		4.5	4.5	4.7	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2793		74	2796	454	
v/s Ratio Prot	0.45			0.34	c0.09	
v/s Ratio Perm			c0.46			
v/c Ratio	0.73		0.74	0.55	0.29	
Uniform Delay, d1	12.2		12.3	10.1	24.3	
Progression Factor	1.00		1.56	1.60	1.00	
Incremental Delay, d2	1.7		39.7	0.6	0.4	
Delay (s)	13.9		58.8	16.8	24.7	
Level of Service	B		E	B	C	
Approach Delay (s)	13.9			18.2	24.7	
Approach LOS	B			B	C	

Intersection Summary

HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	3167	1417	1583	3167	1417	1583	3167	1417	1583	3143	3143
Flt Permitted	0.15	1.00	1.00	0.10	1.00	1.00	0.15	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	257	3167	1417	167	3167	1417	247	3167	1417	215	3143	3143
Volume (vph)	106	1455	97	178	1169	171	121	1297	239	122	1312	69
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	110	1516	101	185	1218	178	126	1351	249	127	1367	72
RTOR Reduction (vph)	0	0	15	0	0	1	0	0	120	0	4	0
Lane Group Flow (vph)	110	1516	86	185	1218	177	126	1351	129	127	1435	0
Turn Type	Perm		Perm	pm+pt		pm+ov	Perm		Perm	pm+pt		
Protected Phases		6		5		2	7		8		7	4
Permitted Phases	6		6	2		2	8		8		4	
Actuated Green, G (s)	35.0	35.0	35.0	44.0	44.0	49.7	27.1	27.1	27.1	36.0	36.0	
Effective Green, g (s)	36.0	36.0	36.0	45.0	45.0	51.0	27.0	27.0	27.0	37.0	37.0	
Actuated g/C Ratio	0.40	0.40	0.40	0.50	0.50	0.57	0.30	0.30	0.30	0.41	0.41	
Clearance Time (s)	5.0	5.0	5.0	3.2	5.0	4.3	3.9	3.9	3.9	4.3	5.0	
Vehicle Extension (s)	4.7	4.7	4.7	3.0	4.2	3.0	4.3	4.3	4.3	3.0	4.5	
Lane Grp Cap (vph)	103	1267	567	162	1584	866	74	950	425	180	1292	
v/s Ratio Prot		0.48		c0.06	0.38	0.01		0.43		0.05	c0.46	
v/s Ratio Perm	0.43		0.06	c0.51		0.11	c0.51		0.09	0.24		
v/c Ratio	1.07	1.20	0.15	1.14	0.77	0.20	1.70	1.42	0.30	0.71	1.11	
Uniform Delay, d1	27.0	27.0	17.2	44.7	18.3	9.6	31.5	31.5	24.3	42.6	26.5	
Progression Factor	1.00	1.00	1.00	2.39	0.25	0.30	0.50	0.49	0.14	1.10	1.13	
Incremental Delay, d2	108.2	96.4	0.6	71.1	0.3	0.0	321.4	190.5	0.2	7.3	57.0	
Delay (s)	135.2	123.4	17.8	177.8	5.0	2.9	337.1	206.1	3.6	54.1	87.1	
Level of Service	F	F	B	F	A	A	F	F	A	D	F	
Approach Delay (s)		118.0			25.0			186.4			84.4	
Approach LOS		F			C			F			F	

Intersection Summary

HCM Average Control Delay	105.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	120.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗	↖	↖	↖↗		↖	↖↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3142		1583	3167	1417	1583	3139		1583	3117	
Flt Permitted	0.19	1.00		0.12	1.00	1.00	0.14	1.00		0.12	1.00	
Satd. Flow (perm)	324	3142		196	3167	1417	238	3139		208	3117	
Volume (vph)	187	1315	73	130	823	199	105	1257	77	260	1332	157
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	191	1342	74	133	840	203	107	1283	79	265	1359	160
RTOR Reduction (vph)	0	4	0	0	0	30	0	5	0	0	10	0
Lane Group Flow (vph)	191	1412	0	133	840	173	107	1357	0	265	1509	0
Turn Type	pm+pt			pm+pt		pm+ov	Perm			pm+pt		
Protected Phases	1	6		5	2	7		8		7	4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	40.1	32.3		39.7	32.1	37.9	26.1	26.1		35.1	35.1	
Effective Green, g (s)	41.2	34.2		40.8	34.0	39.0	28.0	28.0		37.0	37.0	
Actuated g/C Ratio	0.46	0.38		0.45	0.38	0.43	0.31	0.31		0.41	0.41	
Clearance Time (s)	3.2	5.9		3.2	5.9	3.2	5.9	5.9		3.2	5.9	
Vehicle Extension (s)	3.0	4.6		3.0	4.7	3.0	4.7	4.7		3.0	4.7	
Lane Grp Cap (vph)	246	1194		194	1196	677	74	977		162	1281	
v/s Ratio Prot	c0.06	c0.45		0.05	0.27	0.01		0.43		c0.09	0.48	
v/s Ratio Perm	0.30			0.26		0.11	0.45			c0.58		
v/c Ratio	0.78	1.18		0.69	0.70	0.26	1.45	1.39		1.64	1.18	
Uniform Delay, d1	16.8	27.9		21.1	23.7	16.2	31.0	31.0		44.7	26.5	
Progression Factor	1.00	1.00		1.78	1.07	0.88	1.49	1.49		0.96	0.50	
Incremental Delay, d2	14.2	90.9		0.9	0.3	0.0	254.5	180.6		293.5	82.5	
Delay (s)	31.0	118.8		38.5	25.6	14.3	300.7	226.7		336.3	95.8	
Level of Service	C			D		C	B	F		F	F	
Approach Delay (s)	108.3			25.1			232.1			131.5		
Approach LOS	F			C			F			F		

Intersection Summary

HCM Average Control Delay	129.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	122.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖↗	↖	↗	↖	↖↗	↗	↖	↖↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	0.98		1.00	1.00	0.75	1.00	1.00	0.65	1.00	0.98	
Flpb, ped/bikes	0.85	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1345	1607		3072	1667	1060	1583	3167	918	1503	3081	
Flt Permitted	0.56	1.00		0.95	1.00	1.00	0.09	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	788	1607		3072	1667	1060	155	3167	918	275	3081	
Volume (vph)	19	422	43	130	325	140	45	1042	291	9	1250	69
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	20	440	45	135	339	146	47	1085	303	9	1302	72
RTOR Reduction (vph)	0	4	0	0	0	17	0	0	0	0	4	0
Lane Group Flow (vph)	20	481	0	135	339	130	47	1085	303	9	1370	0
Conf. Peds. (#/hr)	152		159	159		152	117		165	165		117
Conf. Bikes (#/hr)			5			9			7			6
Turn Type	Perm			Prot		Perm	Perm		pm+ov		Perm	
Protected Phases		8		7	4			6	7			2
Permitted Phases	8					4	6		6		2	
Actuated Green, G (s)	20.2	20.2		10.0	34.2	34.2	46.2	46.2	56.2	46.2	46.2	
Effective Green, g (s)	21.0	21.0		10.0	35.0	35.0	47.0	47.0	57.0	47.0	47.0	
Actuated g/C Ratio	0.23	0.23		0.11	0.39	0.39	0.52	0.52	0.63	0.52	0.52	
Clearance Time (s)	4.8	4.8		4.0	4.8	4.8	4.8	4.8	4.0	4.8	4.8	
Vehicle Extension (s)	5.9	5.9		3.0	5.2	5.2	4.8	4.8	3.0	4.4	4.4	
Lane Grp Cap (vph)	184	375		341	648	412	81	1654	622	144	1609	
v/s Ratio Prot		c0.30		0.04	0.20			0.34	c0.05		c0.44	
v/s Ratio Perm	0.03					0.12	0.30		0.28		0.03	
v/c Ratio	0.11	1.28		0.40	0.52	0.31	0.58	0.66	0.49	0.06	0.85	
Uniform Delay, d1	27.1	34.5		37.2	21.1	19.1	14.7	15.6	8.7	10.6	18.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.30	0.26	0.32	0.37	0.79	
Incremental Delay, d2	1.2	146.3		0.8	3.0	2.0	2.7	0.2	0.1	0.1	0.6	
Delay (s)	28.3	180.8		38.0	24.1	21.1	7.1	4.3	2.9	4.0	15.1	
Level of Service	C	F		D	C	C	A	A	A	A	B	
Approach Delay (s)		174.8			26.4			4.1			15.1	
Approach LOS		F			C			A			B	

Intersection Summary

HCM Average Control Delay	33.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕↕↕		↘	↕↕↕		↘	↕↕		↘	↕↕	↘
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.97		1.00	0.98		1.00	0.94		1.00	1.00	0.81
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4313		1583	4405		1583	2907		1583	3167	1146
Flt Permitted	0.14	1.00		0.14	1.00		0.13	1.00		0.95	1.00	1.00
Satd. Flow (perm)	230	4313		230	4405		222	2907		1583	3167	1146
Volume (vph)	312	1921	334	171	1169	105	102	1281	227	160	1538	218
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	328	2022	352	180	1231	111	107	1348	239	168	1619	229
RTOR Reduction (vph)	0	27	0	0	12	0	0	16	0	0	0	118
Lane Group Flow (vph)	328	2347	0	180	1330	0	107	1571	0	168	1619	111
Conf. Peds. (#/hr)	152		159	159		152	167		215	215		167
Conf. Bikes (#/hr)			5			9			7			6
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8					4
Actuated Green, G (s)	34.8	28.0		34.8	28.0		34.8	29.0		9.8	33.0	33.0
Effective Green, g (s)	35.0	29.0		35.0	29.0		35.0	30.0		9.0	34.0	34.0
Actuated g/C Ratio	0.39	0.32		0.39	0.32		0.39	0.33		0.10	0.38	0.38
Clearance Time (s)	3.2	5.0		3.2	5.0		3.2	5.0		3.2	5.0	5.0
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	180	1390		180	1419		162	969		158	1196	433
v/s Ratio Prot	c0.12	0.54		0.07	0.30		0.04	c0.54		c0.11	c0.51	
v/s Ratio Perm	c0.59			0.32			0.22					0.10
v/c Ratio	1.82	1.69		1.00	0.94		0.66	1.62		1.06	1.35	0.26
Uniform Delay, d1	24.2	30.5		44.2	29.6		43.0	30.0		40.5	28.0	19.3
Progression Factor	1.37	1.23		1.00	1.00		1.08	0.82		0.84	1.47	2.90
Incremental Delay, d2	384.0	311.8		67.1	13.0		8.1	283.5		81.7	163.6	1.1
Delay (s)	417.1	349.2		111.3	42.6		54.3	308.0		115.7	204.7	57.1
Level of Service	F	F		F	D		D	F		F	F	E
Approach Delay (s)		357.5			50.8			292.0			180.5	
Approach LOS		F			D			F			F	

Intersection Summary

HCM Average Control Delay	239.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	133.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗	↖	↔	↗		↕		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)			4.0	4.0	4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor			1.00	0.95	0.91	0.95		0.95		1.00	0.95	
Frbp, ped/bikes			0.98	1.00	0.98	0.96		0.99		1.00	1.00	
Flpb, ped/bikes			1.00	1.00	1.00	1.00		1.00		1.00	1.00	
Frt			0.86	1.00	0.93	0.85		0.99		1.00	1.00	
Flt Protected			1.00	0.95	0.97	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1413	1501	1349	1299		3099		1576	3167	
Flt Permitted			1.00	0.95	0.97	1.00		1.00		0.12	1.00	
Satd. Flow (perm)			1413	1501	1349	1299		3099		204	3167	
Volume (vph)	0	0	82	113	0	117	0	1301	129	176	1190	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	84	115	0	119	0	1328	132	180	1214	0
RTOR Reduction (vph)	0	0	79	0	33	68	0	6	0	0	0	0
Lane Group Flow (vph)	0	0	5	71	50	12	0	1454	0	180	1214	0
Conf. Peds. (#/hr)	10		1	1		10	18		29	29		18
Conf. Bikes (#/hr)			1			2			3			3
Turn Type			custom	Perm		Perm				Perm		
Protected Phases					3			2			2	
Permitted Phases			4	3		3				2		
Actuated Green, G (s)			4.8	12.2	12.2	12.2		58.6		58.6	58.6	
Effective Green, g (s)			5.7	13.1	13.1	13.1		59.2		59.2	59.2	
Actuated g/C Ratio			0.06	0.15	0.15	0.15		0.66		0.66	0.66	
Clearance Time (s)			4.9	4.9	4.9	4.9		4.6		4.6	4.6	
Vehicle Extension (s)			3.0	3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)			89	218	196	189		2038		134	2083	
v/s Ratio Prot								0.47			0.38	
v/s Ratio Perm			c0.00	c0.05	0.04	0.01				c0.88		
v/c Ratio			0.06	0.33	0.25	0.06		0.71		1.34	0.58	
Uniform Delay, d1			39.6	34.5	34.1	33.2		9.9		15.4	8.5	
Progression Factor			1.00	1.00	1.00	1.00		1.00		1.20	0.73	
Incremental Delay, d2			0.3	0.9	0.7	0.1		2.2		159.1	0.1	
Delay (s)			39.9	35.4	34.8	33.3		12.1		177.5	6.3	
Level of Service			D	D	C	C		B		F	A	
Approach Delay (s)		39.9			34.5			12.1			28.4	
Approach LOS		D			C			B			C	
Intersection Summary												
HCM Average Control Delay			21.7									HCM Level of Service C
HCM Volume to Capacity ratio			1.08									
Actuated Cycle Length (s)			90.0									Sum of lost time (s) 12.0
Intersection Capacity Utilization			78.1%									ICU Level of Service D
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑		↑	↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	
Lane Util. Factor		0.91			0.91		1.00	0.86			0.86	
Frt		0.99			0.96		1.00	1.00			1.00	
Flt Protected		1.00			1.00		0.95	1.00			1.00	
Satd. Flow (prot)		4493			4357		1583	5733			5733	
Flt Permitted		1.00			1.00		0.17	1.00			1.00	
Satd. Flow (perm)		4493			4357		284	5733			5733	
Volume (vph)	0	1943	176	0	1202	475	75	1246	0	0	1581	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1983	180	0	1227	485	77	1271	0	0	1613	0
RTOR Reduction (vph)	0	11	0	0	72	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2152	0	0	1640	0	77	1271	0	0	1613	0
Turn Type							Perm					
Protected Phases		6			6			2			2	
Permitted Phases							2					
Actuated Green, G (s)		22.1			22.1		24.5	24.5			24.5	
Effective Green, g (s)		23.0			23.0		23.5	23.5			23.5	
Actuated g/C Ratio		0.23			0.23		0.24	0.24			0.24	
Clearance Time (s)		4.9			4.9		3.0	3.0			3.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		1033			1002		67	1347			1347	
v/s Ratio Prot		c0.48			0.38			0.22			c0.28	
v/s Ratio Perm							0.27					
v/c Ratio		2.08			1.64		1.15	0.94			1.20	
Uniform Delay, d1		38.5			38.5		38.2	37.6			38.2	
Progression Factor		0.70			1.00		1.00	1.00			0.72	
Incremental Delay, d2		487.9			291.2		156.1	14.3			89.6	
Delay (s)		514.7			329.7		194.4	51.9			117.3	
Level of Service		F			F		F	D			F	
Approach Delay (s)		514.7			329.7			60.0			117.3	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	285.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	53.5
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗		↑↑↑	↗		↑↔		↘	↑↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.86	1.00		0.91	1.00		0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85		1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1583	5733	1417		4550	1417		3165		1583	3144	
Flt Permitted	0.17	1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)	284	5733	1417		4550	1417		3165		1583	3144	
Volume (vph)	21	1463	34	0	1363	341	0	1070	3	167	1140	58
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	21	1493	35	0	1391	348	0	1092	3	170	1163	59
RTOR Reduction (vph)	0	0	27	0	0	266	0	0	0	0	3	0
Lane Group Flow (vph)	21	1493	8	0	1391	82	0	1095	0	170	1219	0
Turn Type	Perm		Perm		Perm				Prot			
Protected Phases	2		2		2		8		7		4	
Permitted Phases	2		2		2							
Actuated Green, G (s)	24.5	24.5	24.5		24.5	24.5		31.0		5.0	31.0	
Effective Green, g (s)	23.5	23.5	23.5		23.5	23.5		32.5		5.0	32.5	
Actuated g/C Ratio	0.24	0.24	0.24		0.24	0.24		0.32		0.05	0.32	
Clearance Time (s)	3.0	3.0	3.0		3.0	3.0		5.5		4.0	5.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		5.0		3.0	4.0	
Lane Grp Cap (vph)	67	1347	333		1069	333		1029		79	1022	
v/s Ratio Prot		0.26			c0.31			0.35		c0.11	c0.39	
v/s Ratio Perm	0.07		0.01			0.06						
v/c Ratio	0.31	1.11	0.02		1.30	0.25		1.06		2.15	1.19	
Uniform Delay, d1	31.6	38.2	29.4		38.2	31.1		33.8		47.5	33.8	
Progression Factor	1.00	1.00	1.00		0.84	1.91		0.40		1.00	1.00	
Incremental Delay, d2	11.8	59.9	0.1		136.2	0.2		31.3		557.9	96.4	
Delay (s)	43.4	98.2	29.6		168.2	59.3		44.8		605.4	130.1	
Level of Service	D	F	C		F	E		D		F	F	
Approach Delay (s)		95.9			146.4			44.8			188.2	
Approach LOS		F			F			D			F	

Intersection Summary

HCM Average Control Delay	123.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	39.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑			↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95			0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.99			0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1583	4540		1583	4545		1583	3142			3062	
Flt Permitted	0.17	1.00		0.17	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	290	4540		290	4545		1583	3142			3062	
Volume (vph)	265	2102	30	75	1184	9	33	764	42	0	922	260
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	270	2145	31	77	1208	9	34	780	43	0	941	265
RTOR Reduction (vph)	0	2	0	0	1	0	0	4	0	0	26	0
Lane Group Flow (vph)	270	2174	0	77	1216	0	34	819	0	0	1180	0
Turn Type	Perm		Perm		Prot							
Protected Phases	6		6		3		8				4	
Permitted Phases	6		6									
Actuated Green, G (s)	22.1	22.1		22.1	22.1		5.0	31.0			31.0	
Effective Green, g (s)	23.0	23.0		23.0	23.0		5.0	32.5			32.5	
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.05	0.32			0.32	
Clearance Time (s)	4.9	4.9		4.9	4.9		4.0	5.5			5.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	5.0			4.0	
Lane Grp Cap (vph)	67	1044		67	1045		79	1021			995	
v/s Ratio Prot		0.48			0.27		c0.02	0.26			c0.39	
v/s Ratio Perm	c0.93		0.27									
v/c Ratio	4.03	2.08		1.15	1.16		0.43	0.80			1.19	
Uniform Delay, d1	38.5	38.5		38.5	38.5		46.1	30.8			33.8	
Progression Factor	1.00	1.00		0.71	0.70		1.00	1.00			0.26	
Incremental Delay, d2	1398.3	490.6		82.3	74.8		3.7	6.6			84.9	
Delay (s)	1436.8	529.1		109.7	101.8		49.9	37.5			93.5	
Level of Service	F	F		F	F		D	D			F	
Approach Delay (s)		629.3			102.3			38.0			93.5	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM Average Control Delay	313.1	HCM Level of Service	F
HCM Volume to Capacity ratio	2.21		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	39.5
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↘	↕		↘	↕	↘	↘	↕	↘
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Fr _t	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	3144		1583	3153		1583	3167	1417	1583	3167	1417
Fl _t Permitted	0.14	1.00		0.13	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	235	3144		222	3153		1583	3167	1417	1583	3167	1417
Volume (vph)	113	1349	67	46	823	24	97	702	187	79	921	80
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	118	1405	70	48	857	25	101	731	195	82	959	83
RTOR Reduction (vph)	0	4	0	0	2	0	0	0	61	0	0	46
Lane Group Flow (vph)	118	1471	0	48	880	0	101	731	134	82	959	37
Turn Type	Perm			Perm			Prot		Perm	Prot		Perm
Protected Phases	6			2			3	8		7		4
Permitted Phases	6			2					8			4
Actuated Green, G (s)	29.0	29.0		29.0	29.0		7.8	39.3	39.3	7.7	39.2	39.2
Effective Green, g (s)	30.0	30.0		30.0	30.0		7.8	40.3	40.3	7.7	40.2	40.2
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.09	0.45	0.45	0.09	0.45	0.45
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	5.0	5.0	4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	78	1048		74	1051		137	1418	635	135	1415	633
v/s Ratio Prot		0.47			0.28		c0.06	0.23		0.05	c0.30	
v/s Ratio Perm	c0.50			0.22					0.09			0.03
v/c Ratio	1.51	1.40		0.65	0.84		0.74	0.52	0.21	0.61	0.68	0.06
Uniform Delay, d ₁	30.0	30.0		25.5	27.7		40.1	17.8	15.2	39.7	19.8	14.1
Progression Factor	0.85	0.84		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d ₂	236.7	182.2		36.5	8.0		18.5	1.3	0.8	7.5	2.6	0.2
Delay (s)	262.2	207.4		62.0	35.7		58.6	19.2	15.9	47.2	22.4	14.3
Level of Service	F	F		E	D		E	B	B	D	C	B
Approach Delay (s)		211.5			37.1			22.4			23.6	
Approach LOS		F			D			C			C	

Intersection Summary

HCM Average Control Delay	90.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶			↶↶			↶↶	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			0.95			0.95	
Frt	1.00	0.99		1.00	0.99			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1583	4508		1583	4488			3129			3126	
Flt Permitted	0.10	1.00		0.09	1.00			1.00			0.76	
Satd. Flow (perm)	175	4508		151	4488			3129			2369	
Volume (vph)	172	1941	128	97	1325	133	0	1017	87	37	812	67
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	176	1981	131	99	1352	136	0	1038	89	38	829	68
RTOR Reduction (vph)	0	8	0	0	13	0	0	2	0	0	6	0
Lane Group Flow (vph)	176	2104	0	99	1475	0	0	1125	0	0	929	0
Turn Type	Perm		Perm				Perm					
Protected Phases	6		2				8					
Permitted Phases	6		2				4					
Actuated Green, G (s)	42.4	42.4		42.4	42.4			35.9			35.9	
Effective Green, g (s)	44.1	44.1		44.1	44.1			37.9			37.9	
Actuated g/C Ratio	0.49	0.49		0.49	0.49			0.42			0.42	
Clearance Time (s)	5.7	5.7		5.7	5.7			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	86	2209		74	2199			1318			998	
v/s Ratio Prot		0.47			0.33			0.36				
v/s Ratio Perm	c1.01			0.65							c0.39	
v/c Ratio	2.05	0.95		1.34	0.67			0.85			0.93	
Uniform Delay, d1	22.9	21.9		22.9	17.4			23.5			24.8	
Progression Factor	0.36	0.35		0.53	0.26			1.00			1.00	
Incremental Delay, d2	474.6	1.4		192.1	0.9			5.6			14.6	
Delay (s)	482.9	9.0		204.2	5.4			29.1			39.4	
Level of Service	F	A		F	A			C			D	
Approach Delay (s)		45.5			17.8			29.1			39.4	
Approach LOS		D			B			C			D	

Intersection Summary

HCM Average Control Delay	34.0	HCM Level of Service	C
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	121.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑↑		↗	↑↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.98		1.00	0.99		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4459		1583	4484		1583	4359		1583	4550	1417
Flt Permitted	0.13	1.00		0.13	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	218	4459		218	4484		1583	4359		1583	4550	1417
Volume (vph)	294	1760	270	330	1176	126	75	909	352	220	1642	244
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	306	1833	281	344	1225	131	78	947	367	229	1710	254
RTOR Reduction (vph)	0	23	0	0	15	0	0	37	0	0	0	115
Lane Group Flow (vph)	306	2091	0	344	1341	0	78	1277	0	229	1710	139
Turn Type	Perm			Perm			Prot			Prot		Perm
Protected Phases	4			8			5			1		6
Permitted Phases	4			8			2					6
Actuated Green, G (s)	28.6	28.6		28.6	28.6		7.7	32.0		14.4	37.7	37.7
Effective Green, g (s)	30.6	30.6		30.6	30.6		8.7	33.0		14.4	38.7	38.7
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.10	0.37		0.16	0.43	0.43
Clearance Time (s)	6.0	6.0		6.0	6.0		5.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	4.0	4.0		4.0	4.0		2.0	4.0		2.0	4.0	4.0
Lane Grp Cap (vph)	74	1516		74	1525		153	1598		253	1957	609
v/s Ratio Prot		0.47			0.30		0.05			c0.14	c0.38	
v/s Ratio Perm	1.40			c1.58				0.29				0.10
v/c Ratio	4.14	1.38		4.65	0.88		0.51	0.80		0.91	0.87	0.23
Uniform Delay, d1	29.7	29.7		29.7	28.0		38.6	25.5		37.1	23.4	16.2
Progression Factor	1.00	1.00		0.37	0.32		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1442.2	174.9		1667.1	6.4		1.0	4.3		31.9	5.8	0.9
Delay (s)	1471.9	204.6		1678.1	15.3		39.6	29.8		69.0	29.2	17.1
Level of Service	F	F		F	B		D	C		E	C	B
Approach Delay (s)		364.8			351.8			30.3			32.0	
Approach LOS		F			F			C			C	

Intersection Summary

HCM Average Control Delay	206.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.27		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	120.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	0.92
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	1.00
Satd. Flow (prot)	1561	4540		1577	4511			1585			1650	1306
Flt Permitted	0.13	1.00		0.06	1.00			0.96			0.93	1.00
Satd. Flow (perm)	221	4540		98	4511			1527			1551	1306
Volume (vph)	80	2010	14	25	1392	39	25	182	50	23	154	262
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	85	2138	15	27	1481	41	27	194	53	24	164	279
RTOR Reduction (vph)	0	1	0	0	3	0	0	8	0	0	0	34
Lane Group Flow (vph)	85	2152	0	27	1519	0	0	266	0	0	188	245
Confl. Peds. (#/hr)	67		64	64		67	46		45	45		46
Confl. Bikes (#/hr)			7			5			5			6
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	69.0	69.0		69.0	69.0			25.0			25.0	25.0
Effective Green, g (s)	68.0	68.0		68.0	68.0			24.0			24.0	24.0
Actuated g/C Ratio	0.68	0.68		0.68	0.68			0.24			0.24	0.24
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0			3.0			3.0	3.0
Lane Grp Cap (vph)	150	3087		67	3067			366			372	313
v/s Ratio Prot		c0.47			0.34							
v/s Ratio Perm	0.39			0.28				0.17			0.12	c0.19
v/c Ratio	0.57	0.70		0.40	0.50			0.73			0.51	0.78
Uniform Delay, d1	8.3	9.7		7.1	7.7			35.0			32.9	35.6
Progression Factor	0.75	0.48		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.4	0.1		17.1	0.6			11.9			4.8	17.5
Delay (s)	7.6	4.8		24.1	8.3			46.8			37.7	53.1
Level of Service	A	A		C	A			D			D	D
Approach Delay (s)		4.9			8.6			46.8			46.9	
Approach LOS		A			A			D			D	

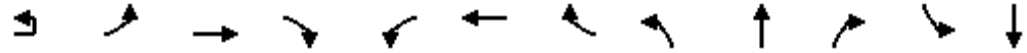
Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘↗	↑↑↗		↘↗	↑↑↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.91		0.97	0.91	
Frbp, ped/bikes	1.00	1.00	0.74	1.00	0.92		1.00	0.97		1.00	0.95	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1575	3167	1042	1583	2823		3072	4394		3072	4204	
Flt Permitted	0.14	1.00	1.00	0.11	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	237	3167	1042	185	2823		3072	4394		3072	4204	
Volume (vph)	351	1135	89	230	567	179	61	2094	124	151	1552	282
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	373	1207	95	245	603	190	65	2228	132	161	1651	300
RTOR Reduction (vph)	0	0	50	0	25	0	0	6	0	0	21	0
Lane Group Flow (vph)	373	1207	45	245	768	0	65	2354	0	161	1930	0
Conf. Peds. (#/hr)	220		169	169		220	310		128	128		310
Conf. Bikes (#/hr)			10			8			9			7
Turn Type	pm+pt		Perm	pm+pt			Prot			Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6		6	2								
Actuated Green, G (s)	49.6	34.6	34.6	49.6	34.6		9.6	43.4		9.6	43.4	
Effective Green, g (s)	50.0	36.0	36.0	50.0	36.0		9.6	44.4		9.6	44.4	
Actuated g/C Ratio	0.42	0.30	0.30	0.42	0.30		0.08	0.37		0.08	0.37	
Clearance Time (s)	3.0	5.4	5.4	3.0	5.4		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	255	950	313	240	847		246	1626		246	1555	
v/s Ratio Prot	c0.17	0.38		0.12	0.27		0.02	c0.54		0.05	c0.46	
v/s Ratio Perm	c0.44		0.04	0.31								
v/c Ratio	1.46	1.27	0.14	1.02	0.91		0.26	1.45		0.65	1.24	
Uniform Delay, d1	29.5	42.0	30.7	55.2	40.4		51.9	37.8		53.6	37.8	
Progression Factor	1.30	0.97	1.23	1.00	1.00		0.96	0.93		1.22	0.45	
Incremental Delay, d2	210.2	122.5	0.0	63.6	15.1		0.4	203.8		0.6	109.1	
Delay (s)	248.6	163.4	37.8	118.8	55.5		50.3	239.1		65.7	126.0	
Level of Service	F	F	D	F	E		D	F		E	F	
Approach Delay (s)		175.3			70.5			234.0			121.4	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	164.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	116.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	
Lane Configurations	↔		↑↑↑		↔	↑↑↑	↔	↔		↔	↔		
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	
Total Lost time (s)	4.0		4.0		4.0	4.0	4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00		0.91		1.00	0.86	0.86	1.00		1.00	0.97		
Frt	1.00		1.00		1.00	0.96	0.85	1.00		0.85	1.00		
Flt Protected	0.95		1.00		0.95	1.00	1.00	0.95		1.00	0.95		
Satd. Flow (prot)	1583		4538		1583	4107	1218	1583		1417	3072		
Flt Permitted	0.95		1.00		0.95	1.00	1.00	0.95		1.00	0.95		
Satd. Flow (perm)	1583		4538		1583	4107	1218	1583		1417	3072		
Volume (vph)	21	0	1161	22	14	837	929	36	0	46	1013	0	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	22	0	1235	23	15	890	988	38	0	49	1078	0	
RTOR Reduction (vph)	0	0	2	0	0	63	355	0	0	47	0	0	
Lane Group Flow (vph)	22	0	1256	0	15	1208	252	38	0	2	1078	0	
Turn Type	Prot				Prot		Perm	Prot			custom	custom	
Protected Phases	5		2		1		6			7			
Permitted Phases							6				7	8	
Actuated Green, G (s)	4.1		51.0		2.0	48.0	48.0	4.0		4.0	41.2		
Effective Green, g (s)	6.0		52.0		3.9	49.9	49.9	5.0		5.0	43.1		
Actuated g/C Ratio	0.05		0.43		0.03	0.42	0.42	0.04		0.04	0.36		
Clearance Time (s)	5.9		5.0		5.9	5.9	5.9	5.0		5.0	5.9		
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	79		1966		51	1708	506	66		59	1103		
v/s Ratio Prot	0.01		c0.28		0.01	c0.29		c0.02					
v/s Ratio Perm							0.21			0.00	c0.35		
v/c Ratio	0.28		0.64		0.29	0.71	0.50	0.58		0.03	0.98		
Uniform Delay, d1	54.9		26.6		56.7	29.0	25.8	56.5		55.2	38.0		
Progression Factor	1.18		1.33		1.03	1.75	9.70	1.00		1.00	1.16		
Incremental Delay, d2	0.2		0.1		1.8	1.4	2.0	11.6		0.2	14.7		
Delay (s)	64.8		35.5		60.4	52.3	252.6	68.0		55.4	58.7		
Level of Service	E		D		E	D	F	E		E	E		
Approach Delay (s)			36.0			116.6			60.9			58.5	
Approach LOS			D			F			E			E	
Intersection Summary													
HCM Average Control Delay			76.9									HCM Level of Service	E
HCM Volume to Capacity ratio			0.79										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	12.0
Intersection Capacity Utilization			72.1%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													



Movement	SBR
Lane Configurations	7
Ideal Flow (vphpl)	1700
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1417
Flt Permitted	1.00
Satd. Flow (perm)	1417
Volume (vph)	66
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	70
RTOR Reduction (vph)	42
Lane Group Flow (vph)	28
Turn Type	custom
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	41.2
Effective Green, g (s)	43.1
Actuated g/C Ratio	0.36
Clearance Time (s)	5.9
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	509
v/s Ratio Prot	
v/s Ratio Perm	0.02
v/c Ratio	0.06
Uniform Delay, d1	25.1
Progression Factor	2.19
Incremental Delay, d2	0.1
Delay (s)	55.2
Level of Service	E
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑	↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor		0.86	1.00		0.86	1.00	1.00	0.91			0.91	
Frt		1.00	0.85		1.00	0.85	1.00	1.00			0.98	
Flt Protected		1.00	1.00		1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)		5733	1417		5733	1417	1583	4549			4442	
Flt Permitted		1.00	1.00		1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)		5733	1417		5733	1417	1583	4549			4442	
Volume (vph)	0	1632	393	0	1261	374	200	2029	2	0	1720	322
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1682	405	0	1300	386	206	2092	2	0	1773	332
RTOR Reduction (vph)	0	0	3	0	0	8	0	0	0	0	22	0
Lane Group Flow (vph)	0	1682	402	0	1300	378	206	2094	0	0	2083	0
Turn Type		pm+ov			Perm		Prot					
Protected Phases		8	1		4		1	6			2	
Permitted Phases		8	8			4						
Actuated Green, G (s)		34.2	48.7		34.2	34.2	14.5	73.8			53.8	
Effective Green, g (s)		36.2	52.2		36.2	36.2	16.0	75.8			55.8	
Actuated g/C Ratio		0.30	0.44		0.30	0.30	0.13	0.63			0.46	
Clearance Time (s)		6.0	5.5		6.0	6.0	5.5	6.0			6.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)		1729	664		1729	427	211	2873			2066	
v/s Ratio Prot		c0.29	0.08		0.23		c0.13	0.46			c0.47	
v/s Ratio Perm			0.20			0.27						
v/c Ratio		0.97	0.60		0.75	0.88	0.98	0.73			1.01	
Uniform Delay, d1		41.4	26.0		37.8	39.9	51.8	15.1			32.1	
Progression Factor		1.25	1.16		1.00	1.00	1.07	0.77			0.30	
Incremental Delay, d2		11.8	1.0		3.1	22.5	43.8	1.1			8.0	
Delay (s)		63.7	31.1		40.9	62.4	99.4	12.7			17.6	
Level of Service		E	C		D	E	F	B			B	
Approach Delay (s)		57.4			45.8			20.5			17.6	
Approach LOS		E			D			C			B	

Intersection Summary

HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕↕↕		↗	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.99			0.97		1.00	1.00		1.00	0.99	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1609			1606		1583	4528		1583	4507	
Flt Permitted		0.79			0.95		0.08	1.00		0.06	1.00	
Satd. Flow (perm)		1311			1530		128	4528		101	4507	
Volume (vph)	218	179	32	10	48	17	54	1993	68	125	1781	119
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	222	183	33	10	49	17	55	2034	69	128	1817	121
RTOR Reduction (vph)	0	2	0	0	8	0	0	3	0	0	6	0
Lane Group Flow (vph)	0	436	0	0	68	0	55	2100	0	128	1932	0
Turn Type		Perm		Perm		Perm		Perm		Perm		Perm
Protected Phases		4		8		8		2		2		6
Permitted Phases		4		8		2		2		6		6
Actuated Green, G (s)		30.0		30.0		83.4		83.4		83.4		83.4
Effective Green, g (s)		29.0		29.0		83.0		83.0		83.0		83.0
Actuated g/C Ratio		0.24		0.24		0.69		0.69		0.69		0.69
Clearance Time (s)		3.0		3.0		3.6		3.6		3.6		3.6
Vehicle Extension (s)		3.0		3.0		5.0		5.0		5.0		5.0
Lane Grp Cap (vph)		317		370		89		3132		70		3117
v/s Ratio Prot								0.46				0.43
v/s Ratio Perm		c0.33		0.04		0.43				c1.27		
v/c Ratio		1.37		0.18		0.62		0.67		1.83		0.62
Uniform Delay, d1		45.5		36.1		10.0		10.6		18.5		10.0
Progression Factor		1.00		1.00		1.00		1.00		0.63		0.35
Incremental Delay, d2		187.3		1.1		28.1		1.2		392.0		0.3
Delay (s)		232.8		37.2		38.1		11.8		403.6		3.8
Level of Service		F		D		D		B		F		A
Approach Delay (s)		232.8		37.2				12.5				28.6
Approach LOS		F		D				B				C

Intersection Summary

HCM Average Control Delay	40.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑↑		↗	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.96		1.00	0.99		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4232		1583	4488		1583	4473		1583	4368	
Flt Permitted	0.12	1.00		0.12	1.00		0.11	1.00		0.12	1.00	
Satd. Flow (perm)	194	4232		194	4488		182	4473		193	4368	
Volume (vph)	172	1982	447	185	1414	60	203	1960	111	71	1582	183
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	183	2109	476	197	1504	64	216	2085	118	76	1683	195
RTOR Reduction (vph)	0	37	0	0	5	0	0	6	0	0	14	0
Lane Group Flow (vph)	183	2548	0	197	1563	0	216	2197	0	76	1864	0
Conf. Peds. (#/hr)	119		158	158		119	159		109	109		159
Conf. Bikes (#/hr)			6			13			4			11
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt		pm+pt		pm+pt	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	43.9	34.9		43.9	34.9		44.7	36.7		40.5	34.6	
Effective Green, g (s)	42.4	34.4		42.4	34.4		43.7	36.7		39.5	34.6	
Actuated g/C Ratio	0.42	0.34		0.42	0.34		0.44	0.37		0.40	0.35	
Clearance Time (s)	3.0	3.5		3.0	3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	193	1456		193	1544		178	1642		144	1511	
v/s Ratio Prot	0.08	c0.60		c0.08	0.35		c0.09	c0.49		0.03	0.43	
v/s Ratio Perm	0.33			0.35			0.45			0.18		
v/c Ratio	0.95	1.75		1.02	1.01		1.21	1.34		0.53	1.23	
Uniform Delay, d1	23.3	32.8		48.2	32.8		48.7	31.6		25.2	32.7	
Progression Factor	0.85	0.85		1.52	0.97		1.71	0.81		1.00	1.00	
Incremental Delay, d2	35.1	339.2		65.0	24.2		120.0	154.4		1.6	111.0	
Delay (s)	55.0	367.0		138.1	55.9		203.0	180.1		26.8	143.7	
Level of Service	D	F		F	E		F	F		C	F	
Approach Delay (s)		346.4			65.1			182.1			139.1	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	200.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	132.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕↕		↕	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes		0.96			1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.99		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1499			1604		1583	4486		1583	4497	
Flt Permitted		0.88			0.33		0.06	1.00		0.06	1.00	
Satd. Flow (perm)		1324			535		104	4486		104	4497	
Volume (vph)	116	305	287	116	106	19	57	2073	116	23	2025	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	122	321	302	122	112	20	60	2182	122	24	2132	63
RTOR Reduction (vph)	0	5	0	0	3	0	0	6	0	0	3	0
Lane Group Flow (vph)	0	740	0	0	251	0	60	2298	0	24	2192	0
Conf. Peds. (#/hr)	29		64	64		29	102		42	42		102
Conf. Bikes (#/hr)			4			5			5			15
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.0			29.0		64.2	64.2		64.2	64.2	
Effective Green, g (s)		28.0			28.0		64.0	64.0		64.0	64.0	
Actuated g/C Ratio		0.28			0.28		0.64	0.64		0.64	0.64	
Clearance Time (s)		3.0			3.0		3.8	3.8		3.8	3.8	
Vehicle Extension (s)		3.0			3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		371			150		67	2871		67	2878	
v/s Ratio Prot								0.51			0.49	
v/s Ratio Perm		c0.56			0.47		c0.58			0.23		
v/c Ratio		1.99			1.67		0.90	0.80		0.36	0.76	
Uniform Delay, d1		36.0			36.0		15.2	13.3		8.4	12.6	
Progression Factor		1.00			1.00		1.00	1.00		1.30	1.18	
Incremental Delay, d2		457.1			330.7		83.2	2.4		1.3	0.2	
Delay (s)		493.1			366.7		98.3	15.7		12.3	15.1	
Level of Service		F			F		F	B		B	B	
Approach Delay (s)		493.1			366.7			17.8			15.1	
Approach LOS		F			F			B			B	

Intersection Summary

HCM Average Control Delay	96.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	107.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑↑		↖	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4505		1583	4532		1583	4515		1583	4433	
Flt Permitted	0.14	1.00		0.12	1.00		0.12	1.00		0.12	1.00	
Satd. Flow (perm)	236	4505		206	4532		200	4515		198	4433	
Volume (vph)	336	2425	170	74	1624	45	110	1821	99	247	1734	358
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	361	2608	183	80	1746	48	118	1958	106	266	1865	385
RTOR Reduction (vph)	0	8	0	0	3	0	0	6	0	0	35	0
Lane Group Flow (vph)	361	2783	0	80	1791	0	118	2058	0	266	2215	0
Turn Type	Perm		pm+pt		pm+pt		pm+pt		pm+pt			
Protected Phases	6		5		2		3		8		7	
Permitted Phases	6		2				8				4	
Actuated Green, G (s)	27.3	27.3	36.7		36.7		39.0	32.3	39.6		32.6	
Effective Green, g (s)	28.3	28.3	37.7		37.7		40.0	33.3	40.6		33.6	
Actuated g/C Ratio	0.31	0.31	0.42		0.42		0.44	0.37	0.45		0.37	
Clearance Time (s)	5.0	5.0	3.5		5.0		4.0	5.0	4.0		5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	74	1417	169		1898		192	1671	197		1655	
v/s Ratio Prot	0.62		0.03		c0.40		0.05	0.46	c0.10		0.50	
v/s Ratio Perm	c1.53		0.17				0.23		c0.50			
v/c Ratio	4.88	1.96	0.47		0.94		0.61	1.23	1.35		1.34	
Uniform Delay, d1	30.9	30.9	21.8		25.1		21.2	28.4	43.7		28.2	
Progression Factor	1.42	1.42	1.00		1.00		1.47	0.47	1.00		1.00	
Incremental Delay, d2	1748.0	434.0	2.1		11.1		0.5	104.7	187.3		156.4	
Delay (s)	1791.8	477.8	23.9		36.2		31.6	118.0	231.0		184.6	
Level of Service	F		C		D		C	F	F		F	
Approach Delay (s)	628.3				35.7		113.3				189.5	
Approach LOS	F				D		F				F	

Intersection Summary

HCM Average Control Delay	285.0	HCM Level of Service	F
HCM Volume to Capacity ratio	2.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	131.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕		↔	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.97		1.00	0.98		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3087		1583	3097		1583	4467		1583	4480	
Flt Permitted	0.28	1.00		0.13	1.00		0.12	1.00		0.14	1.00	
Satd. Flow (perm)	464	3087		222	3097		202	4467		230	4480	
Volume (vph)	184	1304	264	206	744	128	394	1745	242	144	1872	215
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	198	1402	284	222	800	138	424	1876	260	155	2013	231
RTOR Reduction (vph)	0	18	0	0	3	0	0	20	0	0	16	0
Lane Group Flow (vph)	198	1668	0	222	935	0	424	2116	0	155	2228	0
Turn Type	Perm		pm+pt		pm+pt		Perm		Perm		Perm	
Protected Phases	8		7		4		1		6		2	
Permitted Phases	8		4		6		6		2		2	
Actuated Green, G (s)	25.0	25.0		38.0	38.0		42.0	42.0		28.0	28.0	
Effective Green, g (s)	26.0	26.0		39.0	39.0		43.0	43.0		29.0	29.0	
Actuated g/C Ratio	0.29	0.29		0.43	0.43		0.48	0.48		0.32	0.32	
Clearance Time (s)	5.0	5.0		3.0	5.0		4.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	134	892		232	1342		250	2134		74	1444	
v/s Ratio Prot	c0.54		c0.10		0.30		c0.19		0.47		0.50	
v/s Ratio Perm	0.43		0.32		0.62		0.62		0.62		c0.67	
v/c Ratio	1.48	1.87		0.96	0.70		1.70	0.99		2.09	1.54	
Uniform Delay, d1	32.0	32.0		42.4	20.7		42.2	23.3		30.5	30.5	
Progression Factor	1.00	1.00		1.82	1.73		1.00	1.00		0.85	0.85	
Incremental Delay, d2	250.6	395.5		38.4	2.2		329.9	17.6		496.7	244.8	
Delay (s)	282.6	427.5		115.4	38.0		372.1	40.9		522.6	270.6	
Level of Service	F	F		F	D		F	D		F	F	
Approach Delay (s)	412.3		52.8		95.8		286.8		286.8		286.8	
Approach LOS	F		D		F		F		F		F	

Intersection Summary

HCM Average Control Delay	221.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	146.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.98		1.00	0.97		1.00	0.97		1.00	0.98	
Flpb, ped/bikes	0.96	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1524	3057		1567	3011		1583	2990		1583	3042	
Flt Permitted	0.22	1.00		0.11	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	357	3057		178	3011		178	2990		191	3042	
Volume (vph)	168	1083	158	27	764	127	86	848	208	263	968	111
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	173	1116	163	28	788	131	89	874	214	271	998	114
RTOR Reduction (vph)	0	10	0	0	11	0	0	18	0	0	8	0
Lane Group Flow (vph)	173	1269	0	28	908	0	89	1070	0	271	1104	0
Conf. Peds. (#/hr)	100		104	104		100	104		100	100		104
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	59.6	59.6		59.6	59.6		49.1	49.1		49.1	49.1	
Effective Green, g (s)	61.5	61.5		61.5	61.5		50.5	50.5		50.5	50.5	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.42	0.42		0.42	0.42	
Clearance Time (s)	5.9	5.9		5.9	5.9		5.4	5.4		5.4	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	183	1567		91	1543		75	1258		80	1280	
v/s Ratio Prot		0.42			0.30			0.36			0.36	
v/s Ratio Perm	c0.49			0.16			0.50			c1.42		
v/c Ratio	0.95	0.81		0.31	0.59		1.19	0.85		3.39	0.86	
Uniform Delay, d1	27.7	24.4		16.9	20.4		34.8	31.3		34.8	31.6	
Progression Factor	1.00	1.00		0.63	0.61		0.74	0.78		1.00	1.00	
Incremental Delay, d2	53.5	4.6		2.7	0.5		153.3	6.2		1105.4	7.8	
Delay (s)	81.2	29.0		13.3	13.0		179.1	30.7		1140.2	39.5	
Level of Service	F	C		B	B		F	C		F	D	
Approach Delay (s)		35.2			13.1			41.9			255.1	
Approach LOS		D			B			D			F	

Intersection Summary

HCM Average Control Delay	93.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.04		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	112.6%	ICU Level of Service	H
Analysis Period (min)	15		

























c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1583	4509		1583	4542			1614			1636	
Flt Permitted	0.08	1.00		0.06	1.00			0.97			0.98	
Satd. Flow (perm)	138	4509		100	4542			1574			1615	
Volume (vph)	46	2318	149	71	1718	21	12	103	30	14	233	33
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	49	2492	160	76	1847	23	13	111	32	15	251	35
RTOR Reduction (vph)	0	7	0	0	1	0	0	5	0	0	5	0
Lane Group Flow (vph)	49	2645	0	76	1869	0	0	152	0	0	297	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	68.0	68.0		68.0	68.0			26.0			26.0	
Effective Green, g (s)	67.0	67.0		67.0	67.0			25.0			25.0	
Actuated g/C Ratio	0.67	0.67		0.67	0.67			0.25			0.25	
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0			3.0			3.0	
Lane Grp Cap (vph)	92	3021		67	3043			394			404	
v/s Ratio Prot		0.59			0.41							
v/s Ratio Perm	0.36			c0.76				0.10			c0.18	
v/c Ratio	0.53	0.88		1.13	0.61			0.38			0.73	
Uniform Delay, d1	8.5	13.2		16.5	9.3			31.1			34.4	
Progression Factor	0.54	0.59		0.87	0.48			1.00			1.00	
Incremental Delay, d2	2.0	0.4		76.6	0.1			2.8			11.2	
Delay (s)	6.5	8.2		90.9	4.5			33.9			45.7	
Level of Service	A	A		F	A			C			D	
Approach Delay (s)		8.2			7.9			33.9			45.7	
Approach LOS		A			A			C			D	

Intersection Summary

HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3167	1417	1583	4550	1417	1583	1667	1417	1583	1646	
Flt Permitted	0.27	1.00	1.00	0.27	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	444	3167	1417	444	4550	1417	1583	1667	1417	1583	1646	
Volume (vph)	199	838	176	111	952	58	83	670	32	240	673	62
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	212	891	187	118	1013	62	88	713	34	255	716	66
RTOR Reduction (vph)	0	0	140	0	0	47	0	0	4	0	6	0
Lane Group Flow (vph)	212	891	47	118	1013	16	88	713	30	255	776	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4			4		1	2		1	6	
Permitted Phases	4		4	4		4			2			
Actuated Green, G (s)	14.0	14.0	14.0	14.0	14.0	14.0	4.0	28.2	28.2	4.0	28.2	
Effective Green, g (s)	15.0	15.0	15.0	15.0	15.0	15.0	4.0	29.0	29.0	4.0	29.0	
Actuated g/C Ratio	0.25	0.25	0.25	0.25	0.25	0.25	0.07	0.48	0.48	0.07	0.48	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.8	4.8	4.0	4.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	792	354	111	1138	354	106	806	685	106	796	
v/s Ratio Prot		0.28			0.22		0.06	0.43		c0.16	c0.47	
v/s Ratio Perm	c0.48		0.03	0.27		0.01			0.02			
v/c Ratio	1.91	1.12	0.13	1.06	0.89	0.04	0.83	0.88	0.04	2.41	0.98	
Uniform Delay, d1	22.5	22.5	17.5	22.5	21.7	17.1	27.7	14.0	8.2	28.0	15.1	
Progression Factor	1.00	1.00	1.00	1.27	1.22	1.01	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	441.1	72.2	0.8	97.3	9.3	0.2	39.8	13.6	0.1	660.4	26.4	
Delay (s)	463.6	94.7	18.2	125.8	35.9	17.5	67.4	27.6	8.3	688.4	41.6	
Level of Service	F	F	B	F	D	B	E	C	A	F	D	
Approach Delay (s)		144.2			43.8			31.0			200.6	
Approach LOS		F			D			C			F	
Intersection Summary												
HCM Average Control Delay		108.4					HCM Level of Service		F			
HCM Volume to Capacity ratio		1.39										
Actuated Cycle Length (s)		60.0					Sum of lost time (s)		12.0			
Intersection Capacity Utilization		101.8%					ICU Level of Service		G			
Analysis Period (min)		15										
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4498		1583	4532		1583	3088		1583	3126	
Flt Permitted	0.10	1.00		0.10	1.00		0.13	1.00		0.18	1.00	
Satd. Flow (perm)	161	4498		161	4532		218	3088		299	3126	
Volume (vph)	147	2442	201	231	1570	43	189	626	125	73	706	66
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	152	2518	207	238	1619	44	195	645	129	75	728	68
RTOR Reduction (vph)	0	9	0	0	3	0	0	16	0	0	7	0
Lane Group Flow (vph)	152	2716	0	238	1660	0	195	758	0	75	789	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	50.4	42.4		50.4	42.4		39.6	31.6		35.6	29.6	
Effective Green, g (s)	48.4	41.4		48.4	41.4		37.6	30.6		33.6	28.6	
Actuated g/C Ratio	0.48	0.41		0.48	0.41		0.38	0.31		0.34	0.29	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	177	1862		177	1876		178	945		165	894	
v/s Ratio Prot	0.06	c0.60		c0.09	0.37		c0.08	0.25		0.02	0.25	
v/s Ratio Perm	0.35			0.56			c0.34			0.13		
v/c Ratio	0.86	1.46		1.34	0.88		1.10	0.80		0.45	0.88	
Uniform Delay, d1	19.9	29.3		48.7	27.1		26.7	31.9		24.3	34.1	
Progression Factor	1.89	1.48		1.68	1.79		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.8	206.6		181.8	5.3		95.3	7.1		0.7	12.3	
Delay (s)	41.6	249.9		263.5	53.8		122.0	39.1		25.0	46.4	
Level of Service	D	F		F	D		F	D		C	D	
Approach Delay (s)		238.9			80.0			55.8			44.5	
Approach LOS		F			F			E			D	

Intersection Summary

HCM Average Control Delay	140.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	121.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4535		1583	4531		1583	3069		1583	3028	
Flt Permitted	0.11	1.00		0.10	1.00		0.14	1.00		0.17	1.00	
Satd. Flow (perm)	186	4535		175	4531		239	3069		275	3028	
Volume (vph)	73	2706	59	399	1513	42	225	856	221	49	665	274
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	78	2879	63	424	1610	45	239	911	235	52	707	291
RTOR Reduction (vph)	0	2	0	0	3	0	0	23	0	0	49	0
Lane Group Flow (vph)	78	2940	0	424	1652	0	239	1123	0	52	949	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	42.4	36.8		47.2	39.2		36.2	28.9		29.5	25.2	
Effective Green, g (s)	40.4	35.8		45.2	38.2		34.9	27.9		27.5	24.2	
Actuated g/C Ratio	0.45	0.40		0.50	0.42		0.39	0.31		0.31	0.27	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	155	1804		197	1923		197	951		132	814	
v/s Ratio Prot	0.03	0.65		c0.17	0.36		c0.09	0.37		0.01	0.31	
v/s Ratio Perm	0.20			c0.91			c0.38			0.11		
v/c Ratio	0.50	1.63		2.15	0.86		1.21	1.18		0.39	1.17	
Uniform Delay, d1	17.1	27.1		43.7	23.5		25.2	31.1		25.5	32.9	
Progression Factor	1.00	1.00		1.41	0.76		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	285.8		520.1	0.5		133.3	92.1		0.7	87.8	
Delay (s)	18.0	312.9		581.8	18.3		158.5	123.1		26.3	120.7	
Level of Service	B	F		F	B		F	F		C	F	
Approach Delay (s)		305.3			133.2			129.2			116.1	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	199.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	142.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗		↗	↗	↗	↗	↗↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91			0.91		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.99			0.99		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	4522			4522		1583	1667	1417	1583	3082	
Flt Permitted	0.09	1.00			1.00		0.23	1.00	1.00	0.38	1.00	
Satd. Flow (perm)	150	4522			4522		383	1667	1417	626	3082	
Volume (vph)	221	2628	113	0	1840	80	108	368	24	15	494	107
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	235	2796	120	0	1957	85	115	391	26	16	526	114
RTOR Reduction (vph)	0	4	0	0	5	0	0	0	17	0	18	0
Lane Group Flow (vph)	235	2912	0	0	2037	0	115	391	9	16	622	0
Turn Type	pm+pt		pm+pt			pm+pt			Perm		pm+pt	
Protected Phases	5	2		1	6		3	8		8	4	
Permitted Phases	2			6			8			8	4	
Actuated Green, G (s)	51.4	51.4			41.4		42.6	37.2	37.2	35.2	32.8	
Effective Green, g (s)	50.4	50.4			40.4		41.6	36.2	36.2	33.2	31.8	
Actuated g/C Ratio	0.50	0.50			0.40		0.42	0.36	0.36	0.33	0.32	
Clearance Time (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Vehicle Extension (s)	2.0	5.0			5.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	162	2279			1827		229	603	513	221	980	
v/s Ratio Prot	0.09	c0.64			0.45		c0.03	c0.23		0.00	0.20	
v/s Ratio Perm	c0.65						0.18		0.01	0.02		
v/c Ratio	1.45	1.28			1.12		0.50	0.65	0.02	0.07	0.63	
Uniform Delay, d1	24.9	24.8			29.8		19.9	26.6	20.5	23.0	29.1	
Progression Factor	1.12	1.19			1.79		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	228.3	127.8			56.5		0.6	5.3	0.1	0.1	3.1	
Delay (s)	256.4	157.3			109.7		20.5	31.9	20.6	23.0	32.3	
Level of Service	F	F			F		C	C	C	C	C	
Approach Delay (s)		164.7			109.7			28.9			32.0	
Approach LOS		F			F			C			C	

Intersection Summary

HCM Average Control Delay	122.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	0.99		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	2227		1118	2222		1118	2172		1118	2215	
Flt Permitted	0.07	1.00		0.07	1.00		0.39	1.00		0.23	1.00	
Satd. Flow (perm)	77	2227		77	2222		460	2172		268	2215	
Volume (vph)	13	2235	60	156	1806	72	92	454	106	100	364	23
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	13	2304	62	161	1862	74	95	468	109	103	375	24
RTOR Reduction (vph)	0	2	0	0	3	0	0	8	0	0	5	0
Lane Group Flow (vph)	13	2364	0	161	1933	0	95	569	0	103	394	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			4		
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	60.5	60.5		60.5	60.5		20.8	20.8		20.8	20.8	
Effective Green, g (s)	61.0	61.0		61.0	61.0		21.0	21.0		21.0	21.0	
Actuated g/C Ratio	0.68	0.68		0.68	0.68		0.23	0.23		0.23	0.23	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	52	1509		52	1506		107	507		63	517	
v/s Ratio Prot		1.06			0.87			0.26			0.18	
v/s Ratio Perm	0.17			c2.09			0.21			c0.38		
v/c Ratio	0.25	1.57		3.10	1.28		0.89	1.12		1.63	0.76	
Uniform Delay, d1	5.6	14.5		14.5	14.5		33.4	34.5		34.5	32.2	
Progression Factor	0.42	0.30		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	255.2		991.9	132.7		60.5	78.3		346.4	10.1	
Delay (s)	3.4	259.5		1006.4	147.2		93.9	112.8		380.9	42.3	
Level of Service	A	F		F	F		F	F		F	D	
Approach Delay (s)		258.1			213.2			110.1			111.8	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	210.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	161.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						0.95			0.95	
Frbp, ped/bikes		0.99						0.99			1.00	
Flpb, ped/bikes		1.00						1.00			1.00	
Frt		0.99						0.98			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		3058						3086			3130	
Flt Permitted		0.99						1.00			0.79	
Satd. Flow (perm)		3058						3086			2477	
Volume (vph)	178	561	76	0	0	0	0	400	51	71	419	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	193	610	83	0	0	0	0	435	55	77	455	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	16	0	0	0	0
Lane Group Flow (vph)	0	879	0	0	0	0	0	474	0	0	532	0
Conf. Peds. (#/hr)	5		38					63		59	59	63
Conf. Bikes (#/hr)			5							1		1
Turn Type	Perm						Perm					
Protected Phases		2						8			4	
Permitted Phases	2									4		
Actuated Green, G (s)		37.0						17.0			17.0	
Effective Green, g (s)		36.0						16.0			16.0	
Actuated g/C Ratio		0.60						0.27			0.27	
Clearance Time (s)		3.0						3.0			3.0	
Vehicle Extension (s)		5.0						3.0			3.0	
Lane Grp Cap (vph)		1835						823			661	
v/s Ratio Prot								0.15				
v/s Ratio Perm		0.29									c0.21	
v/c Ratio		0.48						0.58			0.80	
Uniform Delay, d1		6.7						19.1			20.5	
Progression Factor		0.63						1.00			1.00	
Incremental Delay, d2		0.4						2.9			10.1	
Delay (s)		4.6						22.0			30.6	
Level of Service		A						C			C	
Approach Delay (s)		4.6			0.0			22.0			30.6	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM Average Control Delay			16.3					HCM Level of Service			B	
HCM Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)			8.0	
Intersection Capacity Utilization			66.0%					ICU Level of Service			C	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑				↗		↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0				4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91				1.00		1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99				0.94		1.00	0.92
Flpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		0.95	1.00
Frt	1.00	1.00		1.00	0.98				0.86		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00				1.00		0.95	1.00
Satd. Flow (prot)	1583	4522		1575	4386				1355		1513	1301
Flt Permitted	0.95	1.00		0.95	1.00				1.00		0.95	1.00
Satd. Flow (perm)	1583	4522		1575	4386				1355		1513	1301
Volume (vph)	148	1988	46	8	1729	323	0	0	82	366	10	229
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	154	2071	48	8	1801	336	0	0	85	381	10	239
RTOR Reduction (vph)	0	2	0	0	26	0	0	0	65	0	0	180
Lane Group Flow (vph)	154	2117	0	8	2111	0	0	0	20	0	391	59
Conf. Peds. (#/hr)	26		44	44		26	50		36	36		50
Conf. Bikes (#/hr)			5			6						3
Turn Type	Prot			Prot				custom	Perm		Perm	
Protected Phases	5	2		1	6						4	
Permitted Phases								8	4			4
Actuated Green, G (s)	12.6	65.7		1.3	54.4			24.0			24.0	24.0
Effective Green, g (s)	11.6	64.7		0.3	53.4			23.0			23.0	23.0
Actuated g/C Ratio	0.12	0.65		0.00	0.53			0.23			0.23	0.23
Clearance Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Vehicle Extension (s)	2.0	5.0		2.0	5.0			3.0			3.0	3.0
Lane Grp Cap (vph)	184	2926		5	2342			312			348	299
v/s Ratio Prot	c0.10	0.47		0.01	c0.48							
v/s Ratio Perm								0.01			0.26	0.05
v/c Ratio	0.84	0.72		1.60	0.90			0.06			1.12	0.20
Uniform Delay, d1	43.3	11.7		49.9	20.9			30.1			38.5	31.0
Progression Factor	1.00	1.00		0.58	1.71			1.00			1.00	1.00
Incremental Delay, d2	25.8	1.6		338.8	0.6			0.4			86.0	1.5
Delay (s)	69.1	13.3		367.9	36.5			30.5			124.5	32.5
Level of Service	E	B		F	D			C			F	C
Approach Delay (s)		17.1			37.7			30.5			89.6	
Approach LOS		B			D			C			F	

Intersection Summary			
HCM Average Control Delay	34.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	2228		1118	2228		1118	2176		1118	2201	
Flt Permitted	0.07	1.00		0.07	1.00		0.18	1.00		0.15	1.00	
Satd. Flow (perm)	84	2228		84	2228		214	2176		181	2201	
Volume (vph)	51	2074	48	31	1857	42	79	864	186	57	629	72
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	53	2160	50	32	1934	44	82	900	194	59	655	75
RTOR Reduction (vph)	0	2	0	0	2	0	0	6	0	0	10	0
Lane Group Flow (vph)	53	2208	0	32	1976	0	82	1088	0	59	720	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	55.5	55.5		55.5	55.5		25.8	25.8		25.8	25.8	
Effective Green, g (s)	56.0	56.0		56.0	56.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio	0.62	0.62		0.62	0.62		0.29	0.29		0.29	0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	52	1386		52	1386		62	629		52	636	
v/s Ratio Prot	c0.99		0.89		0.89		c0.50		c0.50		0.33	
v/s Ratio Perm	0.63		0.38		0.38		0.38		0.38		0.33	
v/c Ratio	1.02	1.59		0.62	1.43		1.32	1.73		1.13	1.13	
Uniform Delay, d1	17.0	17.0		10.4	17.0		32.0	32.0		32.0	32.0	
Progression Factor	1.00	1.00		0.68	0.66		0.50	0.50		1.00	1.00	
Incremental Delay, d2	130.4	270.4		4.8	192.0		155.2	328.7		166.6	78.0	
Delay (s)	147.4	287.4		12.0	203.2		171.2	344.7		198.6	110.0	
Level of Service	F	F		B	F		F	F		F	F	
Approach Delay (s)	284.1		200.2		200.2		332.6		332.6		116.6	
Approach LOS	F		F		F		F		F		F	

Intersection Summary

HCM Average Control Delay	245.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	155.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖		↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00		0.95	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1118	2202		1118	2226		1118	2235	1000		2218	
Flt Permitted	0.17	1.00		0.08	1.00		0.23	1.00	1.00		1.00	
Satd. Flow (perm)	197	2202		90	2226		270	2235	1000		2218	
Volume (vph)	116	1649	180	70	1086	30	82	955	192	0	645	35
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	122	1736	189	74	1143	32	86	1005	202	0	679	37
RTOR Reduction (vph)	0	9	0	0	2	0	0	0	12	0	5	0
Lane Group Flow (vph)	122	1916	0	74	1173	0	86	1005	190	0	711	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			8		4
Permitted Phases	2			6			8			8		
Actuated Green, G (s)	51.5	51.5		51.5	51.5		29.8	29.8	29.8		29.8	
Effective Green, g (s)	52.0	52.0		52.0	52.0		30.0	30.0	30.0		30.0	
Actuated g/C Ratio	0.58	0.58		0.58	0.58		0.33	0.33	0.33		0.33	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2	4.2		4.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	114	1272		52	1286		90	745	333		739	
v/s Ratio Prot	c0.87			0.53			c0.45			0.32		
v/s Ratio Perm	0.62			0.82			0.32			0.19		
v/c Ratio	1.07	1.51		1.42	0.91		0.96	1.35	0.57		0.96	
Uniform Delay, d1	19.0	19.0		19.0	17.0		29.3	30.0	24.7		29.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		0.43	
Incremental Delay, d2	104.4	231.9		271.9	11.3		83.3	165.9	6.9		4.5	
Delay (s)	123.4	250.9		290.9	28.3		112.6	195.9	31.6		17.2	
Level of Service	F	F		F	C		F	F	C		B	
Approach Delay (s)	243.3			43.8			164.7			17.2		
Approach LOS	F			D			F			B		

Intersection Summary

HCM Average Control Delay	146.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	141.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕			↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						0.95			0.95	
Frbp, ped/bikes		1.00						0.97			1.00	
Flpb, ped/bikes		0.99						1.00			1.00	
Frt		0.97						0.98			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		3000						2993			3144	
Flt Permitted		0.99						1.00			0.64	
Satd. Flow (perm)		3000						2993			2023	
Volume (vph)	159	481	165	0	0	0	0	953	180	97	876	0
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	185	559	192	0	0	0	0	1108	209	113	1019	0
RTOR Reduction (vph)	0	38	0	0	0	0	0	26	0	0	0	0
Lane Group Flow (vph)	0	898	0	0	0	0	0	1291	0	0	1132	0
Conf. Peds. (#/hr)	60								223	223		
Conf. Bikes (#/hr)			1							3		
Turn Type	Perm						Perm					
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		20.0						34.0			34.0	
Effective Green, g (s)		19.0						33.0			33.0	
Actuated g/C Ratio		0.32						0.55			0.55	
Clearance Time (s)		3.0						3.0			3.0	
Vehicle Extension (s)		3.0						3.0			3.0	
Lane Grp Cap (vph)		950						1646			1113	
v/s Ratio Prot								0.43				
v/s Ratio Perm		0.30									c0.56	
v/c Ratio		0.94						0.78			1.02	
Uniform Delay, d1		20.0						10.7			13.5	
Progression Factor		1.40						1.00			1.00	
Incremental Delay, d2		11.4						3.8			31.3	
Delay (s)		39.4						14.5			44.8	
Level of Service		D						B			D	
Approach Delay (s)		39.4			0.0			14.5			44.8	
Approach LOS		D			A			B			D	
Intersection Summary												
HCM Average Control Delay			31.5					HCM Level of Service			C	
HCM Volume to Capacity ratio			0.99									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)		8.0		
Intersection Capacity Utilization			103.3%					ICU Level of Service		G		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕	↖		↕↕	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00		0.95	1.00
Frbp, ped/bikes	1.00	0.97		1.00	0.98		1.00	1.00	0.80		1.00	0.84
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1583	4359		1583	4405		1583	3167	1133		3167	1189
Flt Permitted	0.09	1.00		0.09	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	152	4359		149	4405		1583	3167	1133		3167	1189
Volume (vph)	133	2084	209	204	1647	137	253	1019	71	0	952	362
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	141	2217	222	217	1752	146	269	1084	76	0	1013	385
RTOR Reduction (vph)	0	12	0	0	10	0	0	0	50	0	0	123
Lane Group Flow (vph)	141	2427	0	217	1888	0	269	1084	26	0	1013	262
Conf. Peds. (#/hr)	195		257	257		195	112		142	142		112
Conf. Bikes (#/hr)			9			5			5			3
Turn Type	pm+pt			pm+pt			Prot		Perm			Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases	2			6				8				4
Actuated Green, G (s)	53.3	45.0		54.7	45.7		8.9	34.9	34.9		22.9	22.9
Effective Green, g (s)	51.3	44.0		52.7	44.7		8.0	34.0	34.0		22.0	22.0
Actuated g/C Ratio	0.52	0.45		0.54	0.46		0.08	0.35	0.35		0.22	0.22
Clearance Time (s)	3.0	3.0		3.0	3.0		3.1	3.1	3.1		3.1	3.1
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	186	1957		197	2009		129	1099	393		711	267
v/s Ratio Prot	0.06	c0.56		c0.09	0.43		c0.17	0.34			c0.32	
v/s Ratio Perm	0.34			0.50					0.02			0.22
v/c Ratio	0.76	1.24		1.10	0.94		2.09	0.99	0.07		1.42	0.98
Uniform Delay, d1	18.5	27.0		47.2	25.4		45.0	31.8	21.4		38.0	37.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	14.5	112.6		93.9	10.2		513.9	24.1	0.3		199.3	50.2
Delay (s)	32.9	139.6		141.1	35.5		558.9	55.8	21.7		237.3	88.0
Level of Service	C	F		F	D		F	E	C		F	F
Approach Delay (s)		133.8			46.4			148.7			196.2	
Approach LOS		F			D			F			F	

Intersection Summary

HCM Average Control Delay	123.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	98.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	122.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕		↕	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.96			0.97		1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3011			3045		1583	3139		1583	3147	
Flt Permitted		0.82			0.73		0.09	1.00		0.09	1.00	
Satd. Flow (perm)		2473			2245		146	3139		148	3147	
Volume (vph)	62	230	114	81	228	72	84	1204	75	68	1189	50
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	68	253	125	89	251	79	92	1323	82	75	1307	55
RTOR Reduction (vph)	0	45	0	0	22	0	0	4	0	0	3	0
Lane Group Flow (vph)	0	401	0	0	397	0	92	1401	0	75	1359	0
Turn Type		Perm		Perm		pm+pt		pm+pt		pm+pt		
Protected Phases		4		8		5		2		1		6
Permitted Phases		4		8		2				6		
Actuated Green, G (s)		29.0		29.0		52.5		46.6		51.5		46.1
Effective Green, g (s)		28.0		28.0		50.5		45.6		49.5		45.1
Actuated g/C Ratio		0.31		0.31		0.56		0.51		0.55		0.50
Clearance Time (s)		3.0		3.0		3.0		3.0		3.0		3.0
Vehicle Extension (s)		3.0		3.0		2.0		5.0		2.0		5.0
Lane Grp Cap (vph)		769		698		160		1590		152		1577
v/s Ratio Prot						c0.03		c0.45		0.02		0.43
v/s Ratio Perm		0.16		c0.18		0.29				0.25		
v/c Ratio		0.52		0.57		0.57		0.88		0.49		0.86
Uniform Delay, d1		25.5		25.9		14.4		19.8		14.5		19.7
Progression Factor		1.00		1.00		1.00		1.00		1.00		1.00
Incremental Delay, d2		2.5		1.1		3.1		7.4		0.9		6.4
Delay (s)		28.0		27.0		17.5		27.1		15.4		26.2
Level of Service		C		C		B		C		B		C
Approach Delay (s)		28.0		27.0				26.5				25.6
Approach LOS		C		C				C				C

Intersection Summary

HCM Average Control Delay	26.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑			↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95			0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.96			0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1583	4532		1583	4550		1583	3029			3085	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1583	4532		1583	4550		1583	3029			3085	
Volume (vph)	60	2933	81	39	2321	0	11	307	126	0	616	128
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	62	3055	84	41	2418	0	11	320	131	0	642	133
RTOR Reduction (vph)	0	3	0	0	0	0	0	50	0	0	20	0
Lane Group Flow (vph)	62	3136	0	41	2418	0	11	401	0	0	755	0
Turn Type	Prot		Prot		Split							
Protected Phases	1!	2!		5!	6!		8	8			7	
Permitted Phases												
Actuated Green, G (s)	7.3	31.9		5.4	32.8		13.8	13.8			22.0	
Effective Green, g (s)	6.8	31.4		5.4	32.8		13.8	13.8			22.0	
Actuated g/C Ratio	0.08	0.35		0.06	0.36		0.15	0.15			0.24	
Clearance Time (s)	3.5	3.5		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	120	1581		95	1658		243	464			754	
v/s Ratio Prot	c0.04	c0.69		0.03	0.53		0.01	c0.13			c0.24	
v/s Ratio Perm												
v/c Ratio	0.52	1.98		0.43	1.46		0.05	0.86			1.00	
Uniform Delay, d1	40.0	29.3		40.8	28.6		32.5	37.2			34.0	
Progression Factor	1.25	0.54		1.53	0.32		1.00	1.00			1.00	
Incremental Delay, d2	0.3	442.7		0.3	206.6		0.1	15.3			33.2	
Delay (s)	50.5	458.7		62.7	215.6		32.6	52.5			67.2	
Level of Service	D	F		E	F		C	D			E	
Approach Delay (s)		450.8			213.1			52.0			67.2	
Approach LOS		F			F			D			E	

Intersection Summary

HCM Average Control Delay	296.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	95.6%	ICU Level of Service	F
Analysis Period (min)	15		

- ! Phase conflict between lane groups.
- c Critical Lane Group



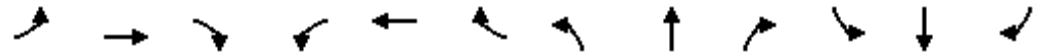
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↓		↑	↑↑↓		↑	↑↓		↑	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt		0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4523		1583	4519		1583	3161		1583	3167	
Flt Permitted		1.00		0.95	1.00		0.18	1.00		0.18	1.00	
Satd. Flow (perm)		4523		1583	4519		303	3161		303	3167	
Volume (vph)	0	2940	121	16	2211	106	107	825	10	7	925	0
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	3031	125	16	2279	109	110	851	10	7	954	0
RTOR Reduction (vph)	0	5	0	0	5	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	3151	0	16	2383	0	110	860	0	7	954	0
Turn Type				Prot			Perm			Perm		
Protected Phases		2!		5!	6		7		7		7	
Permitted Phases							7			7		
Actuated Green, G (s)		31.9		5.4	32.8		22.0	22.0		22.0	22.0	
Effective Green, g (s)		31.4		5.4	32.8		22.0	22.0		22.0	22.0	
Actuated g/C Ratio		0.35		0.06	0.36		0.24	0.24		0.24	0.24	
Clearance Time (s)		3.5		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1578		95	1647		74	773		74	774	
v/s Ratio Prot		c0.70		c0.01	0.53			0.27			0.30	
v/s Ratio Perm							c0.36			0.02		
v/c Ratio		2.00		0.17	1.45		1.49	1.11		0.09	1.23	
Uniform Delay, d1		29.3		40.2	28.6		34.0	34.0		26.3	34.0	
Progression Factor		0.29		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		448.9		0.8	204.5		277.5	68.0		2.5	115.8	
Delay (s)		457.4		41.0	233.1		311.5	102.0		28.8	149.8	
Level of Service		F		D	F		F	F		C	F	
Approach Delay (s)		457.4			231.9			125.7			148.9	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	302.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	29.8
Intersection Capacity Utilization	111.7%	ICU Level of Service	H
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕		↕	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0						4.0		4.0	4.0	
Lane Util. Factor		0.95						0.95		1.00	0.95	
Frbp, ped/bikes		0.99						0.94		1.00	1.00	
Flpb, ped/bikes		0.94						1.00		0.83	1.00	
Frt		0.99						0.97		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		2889						2908		1308	3167	
Flt Permitted		0.99						1.00		0.44	1.00	
Satd. Flow (perm)		2889						2908		610	3167	
Volume (vph)	155	612	31	0	0	0	0	327	67	89	624	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	163	644	33	0	0	0	0	344	71	94	657	0
RTOR Reduction (vph)	0	5	0	0	0	0	0	29	0	0	0	0
Lane Group Flow (vph)	0	835	0	0	0	0	0	386	0	94	657	0
Conf. Peds. (#/hr)	173		248	248			173	221		404	404	221
Conf. Bikes (#/hr)			3				2			1		4
Turn Type		Perm									Perm	
Protected Phases		2						4			4	
Permitted Phases		2									4	
Actuated Green, G (s)		17.0						17.0		17.0	17.0	
Effective Green, g (s)		16.0						16.0		16.0	16.0	
Actuated g/C Ratio		0.27						0.27		0.27	0.27	
Clearance Time (s)		3.0						3.0		3.0	3.0	
Vehicle Extension (s)		5.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		770						775		163	845	
v/s Ratio Prot								0.13			c0.21	
v/s Ratio Perm		0.29								0.15		
v/c Ratio		1.08						0.50		0.58	0.78	
Uniform Delay, d1		22.0						18.6		19.1	20.4	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		57.7						2.3		14.0	7.0	
Delay (s)		79.7						20.9		33.1	27.3	
Level of Service		E						C		C	C	
Approach Delay (s)		79.7			0.0			20.9			28.0	
Approach LOS		E			A			C			C	
Intersection Summary												
HCM Average Control Delay			48.2					HCM Level of Service			D	
HCM Volume to Capacity ratio			0.93									
Actuated Cycle Length (s)			60.0					Sum of lost time (s)		28.0		
Intersection Capacity Utilization			82.3%					ICU Level of Service			E	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑			↑↑↑		↗	↘		↗	↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91			0.91		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00			0.98		1.00	0.87		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			1.00		0.86	1.00		1.00	1.00	1.00
Frt	1.00	1.00			0.99		1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4521			4414		1359	1353		1583	1667	1102
Flt Permitted	0.08	1.00			1.00		0.58	1.00		0.95	1.00	1.00
Satd. Flow (perm)	142	4521			4414		829	1353		1583	1667	1102
Volume (vph)	100	2210	29	0	2191	153	111	97	82	169	290	146
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	102	2255	30	0	2236	156	113	99	84	172	296	149
RTOR Reduction (vph)	0	1	0	0	9	0	0	0	0	0	0	0
Lane Group Flow (vph)	102	2284	0	0	2383	0	113	183	0	172	296	149
Confl. Peds. (#/hr)	244		131	131		244	166		211	211		166
Confl. Bikes (#/hr)			3			5			2			3
Turn Type	Perm			Perm			Prot			custom		
Protected Phases	2			6			8			7		
Permitted Phases	2						8			4 4		
Actuated Green, G (s)	48.1	48.1			48.1		21.0	21.0		11.9	35.9	35.9
Effective Green, g (s)	47.1	47.1			47.1		20.0	20.0		10.9	34.9	34.9
Actuated g/C Ratio	0.52	0.52			0.52		0.22	0.22		0.12	0.39	0.39
Clearance Time (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	3.0
Vehicle Extension (s)	5.0	5.0			5.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	2366			2310		184	301		192	646	427
v/s Ratio Prot		0.51			0.54			0.14		c0.11		
v/s Ratio Perm	c0.72						c0.14				0.18	0.14
v/c Ratio	1.38	0.97			1.03		0.61	0.61		0.90	0.46	0.35
Uniform Delay, d1	21.4	20.7			21.4		31.5	31.5		39.0	20.5	19.5
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	234.6	12.0			27.5		14.4	8.8		37.1	2.3	2.2
Delay (s)	256.0	32.6			48.9		45.9	40.3		76.1	22.8	21.7
Level of Service	F	C			D		D	D		E	C	C
Approach Delay (s)		42.2			48.9			42.4			37.4	
Approach LOS		D			D			D			D	

Intersection Summary

HCM Average Control Delay	44.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			






























Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR2
Lane Configurations		↔	↔↔↔		↔	↔↔↔			↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0			4.0
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frbp, ped/bikes		1.00	0.98		1.00	0.97			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.98			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1583	4436		1583	4320			1442
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1583	4436		1583	4320			1442
Volume (vph)	220	608	2171	121	562	1455	110	69	258
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	227	627	2238	125	579	1500	113	71	266
RTOR Reduction (vph)	0	0	6	0	0	0	0	0	234
Lane Group Flow (vph)	0	854	2357	0	579	1684	0	0	32
Confl. Peds. (#/hr)	99	154		137	137		99	154	155
Confl. Bikes (#/hr)				6			7	10	2
Turn Type	Prot	Prot			Prot				custom
Protected Phases	1	1	2		8	6			1
Permitted Phases									
Actuated Green, G (s)		13.0	52.0		26.0	81.0			13.0
Effective Green, g (s)		12.0	51.0		25.0	80.0			12.0
Actuated g/C Ratio		0.12	0.51		0.25	0.80			0.12
Clearance Time (s)		3.0	3.0		3.0	3.0			3.0
Vehicle Extension (s)		2.5	5.0		3.0	5.0			2.5
Lane Grp Cap (vph)		190	2262		396	3456			173
v/s Ratio Prot		c0.54	c0.53		c0.37	0.39			0.02
v/s Ratio Perm									
v/c Ratio		4.49	1.04		1.46	0.49			0.18
Uniform Delay, d1		44.0	24.5		37.5	3.3			39.6
Progression Factor		1.18	1.53		1.00	1.00			1.00
Incremental Delay, d2		1573.7	20.6		221.5	0.5			0.4
Delay (s)		1625.5	58.1		259.0	3.8			40.0
Level of Service		F	E		F	A			D
Approach Delay (s)			474.1			69.1			
Approach LOS			F			E			
Intersection Summary									
HCM Average Control Delay			294.5			HCM Level of Service			F
HCM Volume to Capacity ratio			1.63						
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			12.0
Intersection Capacity Utilization			94.6%			ICU Level of Service			F
Analysis Period (min)			15						
c Critical Lane Group									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗↘		↖	↖↗↘			↕	↖		↖↗↘	↖
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	0.86	0.86		1.00	0.91			0.95	1.00		0.86	0.86
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.98	0.85
Flt Protected	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	961	3001		1118	3209			2235	1000		2987	860
Flt Permitted	0.95	0.69		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	961	2101		1118	3209			2235	1000		2987	860
Volume (vph)	761	1565	24	185	1807	10	0	1140	573	0	1339	915
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	865	1778	27	210	2053	11	0	1295	651	0	1522	1040
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	199	0	14	335
Lane Group Flow (vph)	441	2228	0	210	2063	0	0	1295	452	0	1689	524
Turn Type	Prot		Prot				Perm				Over	
Protected Phases	7	4		3	8			2			6	7
Permitted Phases									2			
Actuated Green, G (s)	15.9	41.4		13.9	39.4			30.4	30.4		30.4	15.9
Effective Green, g (s)	17.0	42.0		15.0	40.0			31.0	31.0		31.0	17.0
Actuated g/C Ratio	0.17	0.42		0.15	0.40			0.31	0.31		0.31	0.17
Clearance Time (s)	5.1	4.6		5.1	4.6			4.6	4.6		4.6	5.1
Vehicle Extension (s)	3.0	3.0		5.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	163	1035		168	1284			693	310		926	146
v/s Ratio Prot	0.46	0.37		0.19	c0.64			c0.58			0.57	c0.61
v/s Ratio Perm		c0.54							0.45			
v/c Ratio	2.71	2.15		1.25	1.61			1.87	1.46		1.82	3.59
Uniform Delay, d1	41.5	29.0		42.5	30.0			34.5	34.5		34.5	41.5
Progression Factor	1.00	1.00		1.19	0.60			1.00	1.00		1.00	1.00
Incremental Delay, d2	784.6	521.9		127.6	274.3			396.4	222.6		375.1	1180.9
Delay (s)	826.1	550.9		178.1	292.3			430.9	257.1		409.6	1222.4
Level of Service	F	F		F	F			F	F		F	F
Approach Delay (s)		596.3			281.8			372.8			682.2	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	497.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.31		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	172.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			  	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frt		1.00		1.00	1.00		1.00	1.00	0.85	1.00	0.93	
Flt Protected		0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3178		1118	3205		1118	2235	1000	1118	2089	
Flt Permitted		0.67		0.95	1.00		0.13	1.00	1.00	0.13	1.00	
Satd. Flow (perm)		2156		1118	3205		152	2235	1000	157	2089	
Volume (vph)	473	1866	10	346	1345	21	10	827	334	28	607	472
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	483	1904	10	353	1372	21	10	844	341	29	619	482
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	197	0	141	0
Lane Group Flow (vph)	0	2396	0	353	1391	0	10	844	144	29	960	0
Turn Type		Prot		Prot		Perm		Perm	Perm			
Protected Phases		7	4		3	8		2			6	
Permitted Phases							2		2		6	
Actuated Green, G (s)		41.4		13.9	39.4		30.4	30.4	30.4	30.4	30.4	
Effective Green, g (s)		42.0		15.0	40.0		31.0	31.0	31.0	31.0	31.0	
Actuated g/C Ratio		0.42		0.15	0.40		0.31	0.31	0.31	0.31	0.31	
Clearance Time (s)		4.6		5.1	4.6		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)		3.0		5.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1079		168	1282		47	693	310	49	648	
v/s Ratio Prot		c0.38		c0.32	0.43			0.38			c0.46	
v/s Ratio Perm		c0.56					0.07		0.14	0.18		
v/c Ratio		2.22		2.10	1.09		0.21	1.22	0.47	0.59	1.48	
Uniform Delay, d1		29.0		42.5	30.0		25.5	34.5	27.8	29.2	34.5	
Progression Factor		0.80		0.93	1.44		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		549.7		513.8	50.8		10.1	110.9	5.0	43.1	225.1	
Delay (s)		573.0		553.4	94.0		35.6	145.4	32.8	72.3	259.6	
Level of Service		F		F	F		D	F	C	E	F	
Approach Delay (s)		573.0			186.9			112.3			254.8	
Approach LOS		F			F			F			F	
Intersection Summary												
HCM Average Control Delay			328.0			HCM Level of Service			F			
HCM Volume to Capacity ratio			1.92									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			175.1%			ICU Level of Service			H			
Analysis Period (min)			15									
c	Critical Lane Group											



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.86	0.97	0.88
Frbp, ped/bikes		1.00	0.94	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)		4047	938	2168	4047	2168	1760
Flt Permitted		1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)		4047	938	2168	4047	2168	1760
Volume (vph)	0	2193	263	524	1629	348	1177
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	2261	271	540	1679	359	1213
RTOR Reduction (vph)	0	0	67	0	0	0	680
Lane Group Flow (vph)	0	2261	204	540	1679	359	533
Conf. Peds. (#/hr)			60	60		1	4
Conf. Bikes (#/hr)			23				4
Turn Type	Prot		pm+ov	Prot			Over
Protected Phases	1	6	4	3	2 3	4	3
Permitted Phases			6				
Actuated Green, G (s)		49.4	73.1	31.0	86.4	23.7	31.0
Effective Green, g (s)		51.4	78.0	30.0	85.4	26.6	30.0
Actuated g/C Ratio		0.43	0.65	0.25	0.71	0.22	0.25
Clearance Time (s)		6.0	6.9	3.0		6.9	3.0
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1733	641	542	2880	481	440
v/s Ratio Prot		c0.56	0.07	0.25	0.41	c0.17	c0.30
v/s Ratio Perm			0.15				
v/c Ratio		1.30	0.32	1.00	0.58	0.75	1.21
Uniform Delay, d1		34.3	9.3	44.9	8.5	43.6	45.0
Progression Factor		0.89	3.17	1.00	1.00	1.00	1.00
Incremental Delay, d2		138.5	0.1	37.5	0.3	6.2	114.4
Delay (s)		169.1	29.5	82.4	8.8	49.8	159.4
Level of Service		F	C	F	A	D	F
Approach Delay (s)		154.2			26.7	134.3	
Approach LOS		F			C	F	

Intersection Summary

HCM Average Control Delay	104.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	122.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘		↖		↖	↑↑↑		↖	↑↑	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0				4.0	4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	0.88				1.00	0.91			0.95	1.00
Frt	1.00	1.00	0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1504	1504	2493				1583	4550			3167	1417
Flt Permitted	0.95	0.95	1.00				0.10	1.00			1.00	1.00
Satd. Flow (perm)	1504	1504	2493				159	4550			3167	1417
Volume (vph)	604	0	677	0	0	0	124	493	0	0	1108	220
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	686	0	769	0	0	0	141	560	0	0	1259	250
RTOR Reduction (vph)	0	0	640	0	0	0	0	0	0	0	0	177
Lane Group Flow (vph)	343	343	129	0	0	0	141	560	0	0	1259	73
Turn Type	Split		custom				pm+pt			Perm		Over
Protected Phases	4	4	7 1		3		5	2			6	4
Permitted Phases							2			6		
Actuated Green, G (s)	16.5	16.5	14.5				45.6	40.6			40.6	16.5
Effective Green, g (s)	17.1	17.1	15.1				46.8	41.8			41.8	17.1
Actuated g/C Ratio	0.19	0.19	0.17				0.52	0.46			0.46	0.19
Clearance Time (s)	4.6	4.6					4.0	5.2			5.2	4.6
Vehicle Extension (s)	3.0	3.0					3.0	3.2			3.4	3.0
Lane Grp Cap (vph)	286	286	418				162	2113			1471	269
v/s Ratio Prot	c0.23	0.23	c0.05				c0.05	0.12			0.40	0.05
v/s Ratio Perm							c0.40					
v/c Ratio	1.20	1.20	0.31				0.87	0.27			0.86	0.27
Uniform Delay, d1	36.5	36.5	32.9				16.5	14.7			21.4	31.1
Progression Factor	1.00	1.00	5.64				1.80	0.91			1.00	1.00
Incremental Delay, d2	116.1	116.1	0.4				26.2	0.2			6.6	2.5
Delay (s)	152.3	152.3	185.8				55.9	13.5			28.0	33.6
Level of Service	F	F	F				E	B			C	C
Approach Delay (s)		170.1			0.0			22.1			28.9	
Approach LOS		F			A			C			C	

Intersection Summary

HCM Average Control Delay	83.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑		↑↑	↑↑↑		↑↑	↑↑	↑↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.86		0.97	0.91		0.97	0.95	0.88
Frt		1.00	0.85		0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		4550	1417		5628		3072	4495		3072	3167	2493
Flt Permitted		1.00	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		4550	1417		5628		3072	4495		3072	3167	2493
Volume (vph)	0	2879	530	0	2539	356	10	704	62	386	516	249
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	2968	546	0	2618	367	10	726	64	398	532	257
RTOR Reduction (vph)	0	0	62	0	28	0	0	0	0	0	0	163
Lane Group Flow (vph)	0	2968	484	0	2957	0	10	790	0	398	532	94
Turn Type		pm+ov					Prot			Prot		Perm
Protected Phases		6	3		2		3	8		7	4	
Permitted Phases		6										4
Actuated Green, G (s)		39.5	46.3		39.5		6.8	27.7		8.0	28.9	28.9
Effective Green, g (s)		41.0	47.8		41.0		6.8	29.0		8.0	30.2	30.2
Actuated g/C Ratio		0.46	0.53		0.46		0.08	0.32		0.09	0.34	0.34
Clearance Time (s)		5.5	4.0		5.5		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)		4.9	3.0		5.2		3.0	5.1		3.0	5.1	5.1
Lane Grp Cap (vph)		2073	816		2564		232	1448		273	1063	837
v/s Ratio Prot		c0.65	0.04		0.53		0.00	c0.18		c0.13	0.17	
v/s Ratio Perm		0.30										0.04
v/c Ratio		1.43	0.59		1.15		0.04	0.55		1.46	0.50	0.11
Uniform Delay, d1		24.5	14.4		24.5		38.6	25.1		41.0	23.9	20.6
Progression Factor		1.00	1.00		0.91		1.00	1.00		1.26	1.01	2.45
Incremental Delay, d2		197.1	1.2		69.4		0.1	1.5		217.3	0.5	0.1
Delay (s)		221.6	15.6		91.8		38.7	26.6		268.8	24.6	50.7
Level of Service		F	B		F		D	C		F	C	D
Approach Delay (s)		189.6			91.8		26.7			112.1		
Approach LOS		F			F		C			F		

Intersection Summary		
HCM Average Control Delay	129.0	HCM Level of Service F
HCM Volume to Capacity ratio	1.10	
Actuated Cycle Length (s)	90.0	Sum of lost time (s) 12.0
Intersection Capacity Utilization	101.2%	ICU Level of Service G
Analysis Period (min)	15	
c Critical Lane Group		



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.86	1.00	0.97	0.91	0.94	0.88
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1118	4047	1000	2168	3212	3152	1760
Flt Permitted	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1118	4047	1000	2168	3212	3152	1760
Volume (vph)	16	1866	474	288	1683	827	581
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	16	1885	479	291	1700	835	587
RTOR Reduction (vph)	0	0	289	0	0	0	468
Lane Group Flow (vph)	16	1885	190	291	1700	835	119
Conf. Peds. (#/hr)			86	86		1	245
Conf. Bikes (#/hr)			19				3
Turn Type	Prot		Over	Prot		Over	
Protected Phases	1	6	8	5	2	8	5
Permitted Phases							
Actuated Green, G (s)	2.5	47.9	30.1	24.4	68.8	30.1	24.4
Effective Green, g (s)	3.5	50.6	33.0	24.4	71.5	33.0	24.4
Actuated g/C Ratio	0.03	0.42	0.28	0.20	0.60	0.28	0.20
Clearance Time (s)	5.0	6.7	6.9	4.0	6.7	6.9	4.0
Vehicle Extension (s)	3.0	5.0	3.0	3.0	5.0	3.0	3.0
Lane Grp Cap (vph)	33	1706	275	441	1914	867	358
v/s Ratio Prot	0.01	c0.47	0.19	0.13	c0.53	c0.26	0.07
v/s Ratio Perm							
v/c Ratio	0.48	1.10	0.69	0.66	0.89	0.96	0.33
Uniform Delay, d1	57.4	34.7	39.0	44.0	20.8	42.9	40.8
Progression Factor	0.86	1.55	2.14	0.89	0.73	1.00	1.00
Incremental Delay, d2	1.0	48.2	0.7	2.8	5.3	21.9	0.6
Delay (s)	50.3	101.8	83.9	41.9	20.5	64.8	41.4
Level of Service	D	F	F	D	C	E	D
Approach Delay (s)		97.9			23.6	55.1	
Approach LOS		F			C	E	
Intersection Summary							
HCM Average Control Delay			61.8		HCM Level of Service		E
HCM Volume to Capacity ratio			1.00				
Actuated Cycle Length (s)			120.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization			90.7%		ICU Level of Service		E
Analysis Period (min)			15				
c Critical Lane Group							



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↘↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	0.97	0.91	0.91
Frbp, ped/bikes	1.00	1.00	0.89	1.00	1.00	0.85	1.00	1.00	0.87	1.00	0.91	0.91
Flpb, ped/bikes	0.99	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	0.95
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1569	3167	1260	1529	3167	1208	3072	4550	1231	3072	3925	3925
Flt Permitted	0.27	1.00	1.00	0.31	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	444	3167	1260	496	3167	1208	3072	4550	1231	3072	3925	3925
Volume (vph)	45	761	503	295	632	367	265	700	154	220	777	441
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	827	547	321	687	399	288	761	167	239	845	479
RTOR Reduction (vph)	0	0	1	0	0	173	0	0	48	0	110	0
Lane Group Flow (vph)	49	827	546	321	687	226	288	761	119	239	1214	0
Confl. Peds. (#/hr)	141		119	119		141	182		101	101		182
Confl. Bikes (#/hr)			4			5			4			3
Turn Type	pm+pt		pm+ov	Perm		Perm	Prot		Perm	Prot		
Protected Phases	1	6	3		2		3	8		7	4	
Permitted Phases	6		6	2		2			8			
Actuated Green, G (s)	43.3	43.3	49.3	36.5	36.5	36.5	6.0	21.7	21.7	11.0	26.7	
Effective Green, g (s)	44.8	44.8	50.8	38.0	38.0	38.0	6.0	22.2	22.2	11.0	27.2	
Actuated g/C Ratio	0.50	0.50	0.56	0.42	0.42	0.42	0.07	0.25	0.25	0.12	0.30	
Clearance Time (s)	3.5	5.5	4.0	5.5	5.5	5.5	4.0	4.5	4.5	4.0	4.5	
Vehicle Extension (s)	3.0	4.0	2.0	4.0	4.0	4.0	2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	256	1576	767	209	1337	510	205	1122	304	375	1186	
v/s Ratio Prot	0.01	0.26	c0.05		0.22		c0.09	0.17		0.08	c0.31	
v/s Ratio Perm	0.09		0.39	c0.65		0.19			0.10			
v/c Ratio	0.19	0.52	0.71	1.54	0.51	0.44	1.40	0.68	0.39	0.64	1.07dr	
Uniform Delay, d1	12.7	15.4	14.3	26.0	19.2	18.5	42.0	30.7	28.3	37.6	31.4	
Progression Factor	0.96	0.96	0.94	1.05	1.07	1.26	1.03	1.16	1.21	1.00	1.00	
Incremental Delay, d2	0.4	0.4	2.6	263.6	0.4	0.8	208.4	3.3	3.7	2.6	32.4	
Delay (s)	12.6	15.1	16.0	291.0	20.9	24.2	251.7	38.9	37.9	40.2	63.8	
Level of Service	B	B	B	F	C	C	F	D	D	D	E	
Approach Delay (s)		15.3			83.5			89.2			60.2	
Approach LOS		B			F			F			E	

Intersection Summary

HCM Average Control Delay	60.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↘	↑↑↑	↗	↘	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)					4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor					1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frt					1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected					0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)					1583	1417	1583	4550	1417	1583	4550	
Flt Permitted					0.76	1.00	0.10	1.00	1.00	0.34	1.00	
Satd. Flow (perm)					1262	1417	160	4550	1417	565	4550	
Volume (vph)	0	0	0	125	0	193	1	723	95	123	1680	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	136	0	210	1	786	103	134	1826	0
RTOR Reduction (vph)	0	0	0	0	0	160	0	0	28	0	0	0
Lane Group Flow (vph)	0	0	0	0	136	50	1	786	75	134	1826	0
Turn Type	Perm			Perm			Perm	Perm	Perm		Perm	
Protected Phases	4			4			4		2		2	
Permitted Phases	4			4			2		2		2	
Actuated Green, G (s)				15.5			15.5	64.5	64.5	64.5	64.5	64.5
Effective Green, g (s)				16.5			16.5	65.5	65.5	65.5	65.5	65.5
Actuated g/C Ratio				0.18			0.18	0.73	0.73	0.73	0.73	0.73
Clearance Time (s)				5.0			5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)				3.0			3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)				231			260	116	3311	1031	411	3311
v/s Ratio Prot							0.17				c0.40	
v/s Ratio Perm				c0.11			0.04	0.01	0.05		0.24	
v/c Ratio				0.59			0.19	0.01	0.24	0.07	0.33	0.55
Uniform Delay, d1				33.6			31.1	3.4	4.0	3.5	4.4	5.6
Progression Factor				1.00			1.00	2.10	1.63	3.72	1.10	1.18
Incremental Delay, d2				3.8			0.4	0.1	0.2	0.1	1.0	0.3
Delay (s)				37.4			31.5	7.2	6.7	13.2	5.8	6.9
Level of Service				D			C	A	A	B	A	A
Approach Delay (s)	0.0			33.8			7.5				6.8	
Approach LOS	A			C			A				A	

Intersection Summary

HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕	↗	↖	↕↕↕		↖↖	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95	0.95	1.00	0.91		0.97	0.91	
Frt		0.96			0.96	0.85	1.00	0.96		1.00	1.00	
Flt Protected		0.97			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2961			1501	1346	1583	4385		3072	4541	
Flt Permitted		0.80			0.90	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2424			1366	1346	1583	4385		3072	4541	
Volume (vph)	84	31	42	10	16	69	11	677	217	132	1628	22
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	86	32	43	10	16	70	11	691	221	135	1661	22
RTOR Reduction (vph)	0	36	0	0	8	25	0	33	0	0	1	0
Lane Group Flow (vph)	0	125	0	0	27	36	11	879	0	135	1682	0
Turn Type		Perm		Perm	pm+ov	Prot		Prot		Prot		
Protected Phases		8		4	4	5	1	6		5	2	
Permitted Phases		8		4		4						
Actuated Green, G (s)		12.6			12.6	20.7	1.4	55.1		8.1	61.8	
Effective Green, g (s)		14.1			14.1	22.2	1.4	55.8		8.1	62.5	
Actuated g/C Ratio		0.16			0.16	0.25	0.02	0.62		0.09	0.69	
Clearance Time (s)		5.5			5.5	4.0	4.0	4.7		4.0	4.7	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		380			214	392	25	2719		276	3153	
v/s Ratio Prot						0.01	0.01	0.20		c0.04	c0.37	
v/s Ratio Perm		c0.05			0.02	0.02						
v/c Ratio		0.33			0.13	0.09	0.44	0.32		0.49	0.53	
Uniform Delay, d1		33.7			32.7	26.1	43.9	8.1		39.0	6.7	
Progression Factor		1.00			1.00	1.00	0.71	2.12		0.98	0.92	
Incremental Delay, d2		0.5			0.3	0.1	11.3	0.3		1.1	0.5	
Delay (s)		34.2			32.9	26.2	42.3	17.5		39.3	6.7	
Level of Service		C			C	C	D	B		D	A	
Approach Delay (s)		34.2			28.7			17.8			9.1	
Approach LOS		C			C			B			A	

Intersection Summary

HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔↔		↔	↔		↔	↔↔	↑↑↑		↔	↑↑↑		
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	
Total Lost time (s)	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0		
Lane Util. Factor	0.97		1.00	1.00		1.00	0.97	0.91		1.00	0.91		
Frt	1.00		0.85	1.00		0.85	1.00	0.99		1.00	1.00		
Flt Protected	0.95		1.00	0.95		1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	3072		1417	1583		1417	3072	4521		1583	4544		
Flt Permitted	0.95		1.00	0.95		1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)	3072		1417	1583		1417	3072	4521		1583	4544		
Volume (vph)	128	0	179	11	0	115	19	691	31	78	1516	15	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Adj. Flow (vph)	141	0	197	12	0	126	21	759	34	86	1666	16	
RTOR Reduction (vph)	0	0	163	0	0	89	0	4	0	0	1	0	
Lane Group Flow (vph)	141	0	34	12	0	37	21	789	0	86	1681	0	
Turn Type	Prot		custom	Prot		custom	Prot			Prot			
Protected Phases	3		3 5	4		1 4	5	2		1	6		
Permitted Phases													
Actuated Green, G (s)	9.1		15.3	13.0		27.1	6.2	40.8		9.2	43.8		
Effective Green, g (s)	10.0		15.4	13.9		26.3	5.4	41.7		8.4	44.7		
Actuated g/C Ratio	0.11		0.17	0.15		0.29	0.06	0.46		0.09	0.50		
Clearance Time (s)	4.9			4.9			3.2	4.9		3.2	4.9		
Vehicle Extension (s)	3.0			3.0			3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	341		242	244		414	184	2095		148	2257		
v/s Ratio Prot	c0.05		0.02	0.01		c0.03	0.01	0.17		c0.05	c0.37		
v/s Ratio Perm													
v/c Ratio	0.41		0.14	0.05		0.09	0.11	0.38		0.58	0.74		
Uniform Delay, d1	37.3		31.7	32.4		23.1	40.0	15.7		39.1	18.1		
Progression Factor	1.00		1.00	1.00		1.00	1.40	0.39		0.84	1.17		
Incremental Delay, d2	0.8		0.3	0.1		0.1	0.0	0.0		5.1	2.0		
Delay (s)	38.1		31.9	32.5		23.2	56.0	6.1		37.8	23.1		
Level of Service	D		C	C		C	E	A		D	C		
Approach Delay (s)		34.5			24.0			7.4			23.8		
Approach LOS		C			C			A			C		
Intersection Summary													
HCM Average Control Delay			20.7									HCM Level of Service	C
HCM Volume to Capacity ratio			0.58										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	16.0
Intersection Capacity Utilization			58.8%									ICU Level of Service	B
Analysis Period (min)			15										
c	Critical Lane Group												



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔↔	↑↑↑	↑↑↑↔		↔↔	↔↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.91	0.91		0.97	0.88
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3072	4550	4479		3072	2493
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3072	4550	4479		3072	2493
Volume (vph)	524	1808	1733	201	538	1119
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	570	1965	1884	218	585	1216
RTOR Reduction (vph)	0	0	16	0	0	386
Lane Group Flow (vph)	570	1965	2086	0	585	830
Turn Type	Prot					Prot
Protected Phases	5	2 5	6		4	4
Permitted Phases						
Actuated Green, G (s)	14.0	55.5	36.5		24.0	24.0
Effective Green, g (s)	15.0	57.0	38.0		25.0	25.0
Actuated g/C Ratio	0.17	0.63	0.42		0.28	0.28
Clearance Time (s)	5.0		5.5		5.0	5.0
Vehicle Extension (s)	2.0		3.0		3.0	3.0
Lane Grp Cap (vph)	512	2882	1891		853	693
v/s Ratio Prot	c0.19	0.43	c0.47		0.19	c0.33
v/s Ratio Perm						
v/c Ratio	1.11	0.68	1.10		0.69	1.20
Uniform Delay, d1	37.5	10.6	26.0		29.0	32.5
Progression Factor	1.00	1.00	1.00		1.25	1.51
Incremental Delay, d2	74.6	1.3	55.1		1.6	98.5
Delay (s)	112.1	12.0	81.1		37.9	147.5
Level of Service	F	B	F		D	F
Approach Delay (s)		34.5	81.1		111.9	
Approach LOS		C	F		F	

Intersection Summary

HCM Average Control Delay	71.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↑	↑↑↑	↑↑↑	↑
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	0.97	0.91
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3212	1000	2168	3212	2168	910
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3212	1000	2168	3212	2168	910
Volume (vph)	2223	324	133	2402	762	275
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	2292	334	137	2476	786	284
RTOR Reduction (vph)	0	131	0	0	0	205
Lane Group Flow (vph)	2292	203	137	2476	786	79
Conf. Peds. (#/hr)		145	145		56	
Conf. Bikes (#/hr)		19				
Turn Type		Over	Prot			Perm
Protected Phases	6	4	5	2	4	
Permitted Phases						4
Actuated Green, G (s)	66.0	28.1	10.8	80.8	28.1	28.1
Effective Green, g (s)	67.2	30.0	10.8	82.0	30.0	30.0
Actuated g/C Ratio	0.56	0.25	0.09	0.68	0.25	0.25
Clearance Time (s)	5.2	5.9	4.0	5.2	5.9	5.9
Vehicle Extension (s)	3.7	3.8	1.0	3.5	3.8	3.8
Lane Grp Cap (vph)	1799	250	195	2195	542	228
v/s Ratio Prot	c0.71	0.20	0.06	c0.77	c0.36	
v/s Ratio Perm						0.09
v/c Ratio	1.27	0.81	0.70	1.13	1.45	0.35
Uniform Delay, d1	26.4	42.3	53.0	19.0	45.0	37.0
Progression Factor	1.62	1.03	0.97	0.90	1.00	1.00
Incremental Delay, d2	123.7	2.7	4.4	60.9	212.8	4.1
Delay (s)	166.6	46.1	55.7	78.0	257.8	41.1
Level of Service	F	D	E	E	F	D
Approach Delay (s)	151.3			76.8	200.3	
Approach LOS	F			E	F	

Intersection Summary			
HCM Average Control Delay	128.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	123.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.88	0.95	1.00	1.00	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3072	2493	3167	1417	1583	4550
Flt Permitted	0.95	1.00	1.00	1.00	0.40	1.00
Satd. Flow (perm)	3072	2493	3167	1417	665	4550
Volume (vph)	607	438	398	317	220	321
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	667	481	437	348	242	353
RTOR Reduction (vph)	0	277	0	21	0	0
Lane Group Flow (vph)	667	204	437	327	242	353
Turn Type		Perm		pm+ov	pm+pt	
Protected Phases	4		2	4	1	6
Permitted Phases		4		2	6	
Actuated Green, G (s)	37.6	37.6	34.4	72.0	42.4	42.4
Effective Green, g (s)	38.1	38.1	35.9	74.0	43.9	43.9
Actuated g/C Ratio	0.42	0.42	0.40	0.82	0.49	0.49
Clearance Time (s)	4.5	4.5	5.5	4.5	3.0	5.5
Vehicle Extension (s)	3.0	3.0	5.0	3.0	3.0	5.0
Lane Grp Cap (vph)	1300	1055	1263	1228	365	2219
v/s Ratio Prot	c0.22		0.14	0.11	c0.03	0.08
v/s Ratio Perm		0.08		0.12	c0.29	
v/c Ratio	0.51	0.19	0.35	0.27	0.66	0.16
Uniform Delay, d1	19.1	16.3	18.9	1.8	18.1	12.8
Progression Factor	0.97	3.40	1.30	0.76	1.00	1.00
Incremental Delay, d2	0.2	0.0	0.7	0.1	4.5	0.2
Delay (s)	18.8	55.5	25.3	1.5	22.6	13.0
Level of Service	B	E	C	A	C	B
Approach Delay (s)	34.2		14.8			16.9
Approach LOS	C		B			B

Intersection Summary

HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			





























HCM Signalized Intersection Capacity Analysis
75: Olympic Blvd & Century Park West



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↗	↑↑↑	↑↑↑	↖	↖↗	↖↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.91	1.00	0.97	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3072	4550	4550	1417	3072	2493
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3072	4550	4550	1417	3072	2493
Volume (vph)	166	2243	2371	113	5	836
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	169	2289	2419	115	5	853
RTOR Reduction (vph)	0	0	0	52	0	0
Lane Group Flow (vph)	169	2289	2419	63	5	853
Turn Type	Prot			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)	10.1	51.8	37.7	37.7	28.3	28.3
Effective Green, g (s)	10.1	53.0	38.9	38.9	29.0	29.0
Actuated g/C Ratio	0.11	0.59	0.43	0.43	0.32	0.32
Clearance Time (s)	4.0	5.2	5.2	5.2	4.7	4.7
Vehicle Extension (s)	3.0	4.8	4.6	4.6	3.0	3.0
Lane Grp Cap (vph)	345	2679	1967	612	990	803
v/s Ratio Prot	0.06	c0.50	c0.53		0.00	
v/s Ratio Perm				0.04		c0.34
v/c Ratio	0.49	0.85	1.23	0.10	0.01	1.06
Uniform Delay, d1	37.5	15.3	25.6	15.2	20.7	30.5
Progression Factor	0.55	2.04	1.00	1.00	1.00	0.80
Incremental Delay, d2	0.1	0.4	108.1	0.3	0.0	48.7
Delay (s)	20.7	31.6	133.6	15.5	20.8	73.1
Level of Service	C	C	F	B	C	E
Approach Delay (s)		30.8	128.3		72.8	
Approach LOS		C	F		E	

Intersection Summary

HCM Average Control Delay	79.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4550	1417	1583	4515		1583	3152		1583	3123	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.13	1.00		0.15	1.00	
Satd. Flow (perm)	1583	4550	1417	1583	4515		215	3152		247	3123	
Volume (vph)	126	2584	335	102	2248	123	191	1062	35	117	964	97
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	130	2664	345	105	2318	127	197	1095	36	121	994	100
RTOR Reduction (vph)	0	0	111	0	5	0	0	2	0	0	6	0
Lane Group Flow (vph)	130	2664	234	105	2440	0	197	1129	0	121	1088	0
Turn Type	Prot		Perm	Prot		pm+pt				Perm		
Protected Phases	1	6		5	2		3	8				4
Permitted Phases			6				8			4		
Actuated Green, G (s)	12.9	54.3	54.3	11.7	53.1		40.0	40.0		26.0	26.0	
Effective Green, g (s)	12.9	55.3	55.3	11.7	54.1		41.0	41.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.46	0.46	0.10	0.45		0.34	0.34		0.22	0.22	
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		3.5	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	170	2097	653	154	2036		187	1077		56	703	
v/s Ratio Prot	c0.08	c0.59		0.07	0.54		0.09	c0.36			0.35	
v/s Ratio Perm			0.17				0.27			c0.49		
v/c Ratio	0.76	1.27	0.36	0.68	1.20		1.05	1.05		2.16	1.55	
Uniform Delay, d1	52.1	32.4	20.9	52.4	33.0		57.2	39.5		46.5	46.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.65	1.49		1.00	1.00	
Incremental Delay, d2	16.7	125.6	1.5	9.5	94.4		35.6	24.6		576.5	253.4	
Delay (s)	68.7	157.9	22.4	61.8	127.3		130.0	83.4		623.0	299.9	
Level of Service	E	F	C	E	F		F	F		F	F	
Approach Delay (s)		139.3			124.6			90.3			332.0	
Approach LOS		F			F			F			F	
Intersection Summary												
HCM Average Control Delay			155.3			HCM Level of Service				F		
HCM Volume to Capacity ratio			1.40									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			120.5%			ICU Level of Service				H		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕↕↕	↖	↖↗	↕↕↕	↖	↖↗	↕↕	↖	↖↗	↕↕	↖
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3212	1000	2168	3212	1000	2168	2235	1000	2168	2235	1000
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2168	3212	1000	2168	3212	1000	2168	2235	1000	2168	2235	1000
Volume (vph)	84	2066	115	106	2617	444	71	1073	77	371	1331	85
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	87	2130	119	109	2698	458	73	1106	79	382	1372	88
RTOR Reduction (vph)	0	0	51	0	0	26	0	0	45	0	0	37
Lane Group Flow (vph)	87	2130	68	109	2698	432	73	1106	34	382	1372	51
Turn Type	Prot		Perm	Prot		pm+ov	Prot		Perm	Prot		Perm
Protected Phases	1	6		5	2	7	3	8		7	4	
Permitted Phases			6			2			8			4
Actuated Green, G (s)	6.3	25.9	25.9	11.8	31.4	54.2	7.3	39.6	39.6	22.8	55.1	55.1
Effective Green, g (s)	6.3	27.4	27.4	11.8	32.9	55.7	7.3	42.0	42.0	22.8	57.5	57.5
Actuated g/C Ratio	0.05	0.23	0.23	0.10	0.27	0.46	0.06	0.35	0.35	0.19	0.48	0.48
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5	4.0	4.0	6.4	6.4	4.0	6.4	6.4
Vehicle Extension (s)	2.0	4.5	4.5	2.0	5.2	2.0	2.0	4.7	4.7	2.0	4.7	4.7
Lane Grp Cap (vph)	114	733	228	213	881	464	132	782	350	412	1071	479
v/s Ratio Prot	0.04	c0.66		0.05	c0.84	0.18	0.03	c0.49		0.18	c0.61	
v/s Ratio Perm			0.07			0.26			0.03			0.05
v/c Ratio	0.76	2.91	0.30	0.51	3.06	0.93	0.55	1.41	0.10	0.93	1.28	0.11
Uniform Delay, d1	56.1	46.3	38.3	51.4	43.5	30.4	54.8	39.0	26.2	47.8	31.2	17.2
Progression Factor	1.00	0.48	0.14	0.95	0.94	0.89	1.00	1.00	1.00	0.61	0.54	0.19
Incremental Delay, d2	2.5	858.0	0.3	0.1	928.4	3.7	2.8	194.0	0.2	11.1	128.8	0.1
Delay (s)	58.7	880.2	5.8	49.1	969.2	30.7	57.6	233.0	26.5	40.5	145.8	3.3
Level of Service	E	F	A	D	F	C	E	F	C	D	F	A
Approach Delay (s)		805.0			806.8			209.8			117.1	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	574.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	153.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.86		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	5713		1583	3167	1417	1583	3167	1417
Flt Permitted	0.11	1.00	1.00	0.11	1.00		0.15	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	178	4550	1417	188	5713		252	3167	1417	219	3167	1417
Volume (vph)	341	2264	155	140	3150	75	38	824	52	217	1103	272
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	352	2334	160	144	3247	77	39	849	54	224	1137	280
RTOR Reduction (vph)	0	0	25	0	4	0	0	0	5	0	0	0
Lane Group Flow (vph)	352	2334	135	144	3320	0	39	849	49	224	1137	280
Turn Type	pm+pt		Perm	pm+pt		Perm		pm+ov	pm+pt		pm+ov	
Protected Phases	1	6		5	2			8	5	7	4	1
Permitted Phases	6		6	2		8	8	8	4			4
Actuated Green, G (s)	44.0	37.0	37.0	40.0	35.0	25.0	25.0	30.0	34.0	34.0	41.0	
Effective Green, g (s)	44.5	37.5	37.5	40.5	35.5	26.5	26.5	31.5	35.5	35.5	42.5	
Actuated g/C Ratio	0.49	0.42	0.42	0.45	0.39	0.29	0.29	0.35	0.39	0.39	0.47	
Clearance Time (s)	4.0	4.5	4.5	4.0	4.5	5.5	5.5	4.0	4.0	5.5	4.0	
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	5.0	3.0	3.0	5.0	3.0	
Lane Grp Cap (vph)	197	1896	590	162	2253	74	933	559	162	1249	732	
v/s Ratio Prot	c0.14	0.51		0.05	0.58		0.27	0.00	c0.08	0.36	0.03	
v/s Ratio Perm	c0.74		0.10	0.35		0.16		0.03	c0.47		0.17	
v/c Ratio	1.79	1.23	0.23	0.89	1.47	0.53	0.91	0.09	1.38	0.91	0.38	
Uniform Delay, d1	43.7	26.2	16.9	44.2	27.2	26.5	30.6	19.6	24.9	25.7	15.3	
Progression Factor	2.27	0.74	0.78	1.94	1.50	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	355.9	104.4	0.1	5.8	213.4	12.3	13.2	0.1	205.8	10.6	0.3	
Delay (s)	455.3	123.7	13.3	91.6	254.4	38.8	43.8	19.7	230.7	36.3	15.6	
Level of Service	F	F	B	F	F	D	D	B	F	D	B	
Approach Delay (s)		158.5			247.7		42.2				59.3	
Approach LOS		F			F		D				E	

Intersection Summary

HCM Average Control Delay	162.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	129.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↗		↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1583	3069		1583	3156		1504	1583	1417		1611	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1583	3069		1583	3156		1504	1583	1417		1611	
Volume (vph)	10	1146	298	178	954	21	338	644	749	27	291	91
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	1194	310	185	994	22	352	671	780	28	303	95
RTOR Reduction (vph)	0	19	0	0	1	0	0	0	236	0	0	0
Lane Group Flow (vph)	10	1485	0	185	1015	0	352	671	544	0	426	0
Turn Type	Prot		Prot		Split		pm+ov		Split			
Protected Phases	1	6		5	2		3	3	5		4	4
Permitted Phases									3			
Actuated Green, G (s)	1.5	54.9		17.3	70.7		10.1	10.1	27.4		20.0	
Effective Green, g (s)	0.5	55.7		16.3	71.5		11.0	11.0	27.3		21.0	
Actuated g/C Ratio	0.00	0.46		0.14	0.60		0.09	0.09	0.23		0.18	
Clearance Time (s)	3.0	4.8		3.0	4.8		4.9	4.9	3.0		5.0	
Vehicle Extension (s)	3.0	6.0		3.0	6.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	7	1425		215	1880		138	145	370		282	
v/s Ratio Prot	0.01	c0.48		0.12	0.32		0.23	c0.42	c0.20		c0.26	
v/s Ratio Perm									0.18			
v/c Ratio	1.43	1.04		0.86	0.54		2.55	4.63	1.47		1.51	
Uniform Delay, d1	59.8	32.1		50.7	14.5		54.5	54.5	46.4		49.5	
Progression Factor	1.13	1.08		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	251.9	21.4		27.8	1.1		718.7	1648.1	226.3		247.3	
Delay (s)	319.6	56.1		78.5	15.6		773.2	1702.6	272.7		296.8	
Level of Service	F	E		E	B		F	F	F		F	
Approach Delay (s)		57.8			25.3			902.5			296.8	
Approach LOS		E			C			F			F	

Intersection Summary

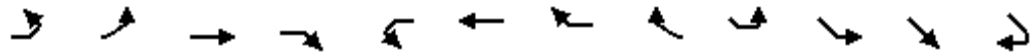
HCM Average Control Delay	378.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	133.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.89		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1504	1511	1417	1583	1484		1583	1654		1583	1667	1417
Flt Permitted	0.71	0.68	1.00	0.95	1.00		0.34	1.00		0.21	1.00	1.00
Satd. Flow (perm)	1122	1077	1417	1583	1484		562	1654		344	1667	1417
Volume (vph)	503	10	172	20	19	52	64	722	39	32	566	343
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	524	10	179	21	20	54	67	752	41	33	590	357
RTOR Reduction (vph)	0	0	153	0	49	0	0	2	0	0	0	143
Lane Group Flow (vph)	262	272	26	21	25	0	67	791	0	33	590	214
Turn Type	Perm		Perm	Split			Perm			Perm		Perm
Protected Phases		4		3	3			2			2	
Permitted Phases	4		4				2			2		2
Actuated Green, G (s)	10.0	10.0	10.0	6.0	6.0		43.6	43.6		43.6	43.6	43.6
Effective Green, g (s)	11.0	11.0	11.0	7.0	7.0		45.0	45.0		45.0	45.0	45.0
Actuated g/C Ratio	0.15	0.15	0.15	0.09	0.09		0.60	0.60		0.60	0.60	0.60
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.4	5.4		5.4	5.4	5.4
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	165	158	208	148	139		337	992		206	1000	850
v/s Ratio Prot				0.01	c0.02			c0.48			0.35	
v/s Ratio Perm	0.23	c0.25	0.02				0.12			0.10		0.15
v/c Ratio	1.59	1.72	0.13	0.14	0.18		0.20	0.80		0.16	0.59	0.25
Uniform Delay, d1	32.0	32.0	27.8	31.2	31.4		6.8	11.5		6.6	9.3	7.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	291.3	349.9	0.3	0.4	0.6		1.3	6.7		1.7	2.6	0.7
Delay (s)	323.3	381.9	28.1	31.7	32.0		8.1	18.2		8.3	11.8	7.8
Level of Service	F	F	C	C	C		A	B		A	B	A
Approach Delay (s)		271.5			31.9			17.4			10.2	
Approach LOS		F			C			B			B	

Intersection Summary

HCM Average Control Delay	83.7	HCM Level of Service	F
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	SEL2	SEL	SET	SER
Lane Configurations			↕	↗		↕↗				↘	↕↗	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)			4.0	4.0		4.0				4.0	4.0	
Lane Util. Factor			1.00	1.00		0.95				1.00	0.95	
Frt			1.00	0.85		0.98				1.00	0.99	
Flt Protected			0.99	1.00		0.98				0.95	1.00	
Satd. Flow (prot)			1161	1000		2162				1118	2209	
Flt Permitted			0.37	1.00		0.54				0.50	1.00	
Satd. Flow (perm)			433	1000		1196				587	2209	
Volume (vph)	11	205	578	48	322	533	53	55	11	5	558	48
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	11	214	602	50	335	555	55	57	11	5	581	50
RTOR Reduction (vph)	0	0	0	26	0	6	0	0	0	0	9	0
Lane Group Flow (vph)	0	0	827	24	0	996	0	0	0	16	622	0
Turn Type		Perm		Perm	Perm				Perm	Perm		
Protected Phases			6			2					4	
Permitted Phases		6		6	2				4	4		
Actuated Green, G (s)			34.0	34.0		34.0				30.0	30.0	
Effective Green, g (s)			36.0	36.0		36.0				31.0	31.0	
Actuated g/C Ratio			0.48	0.48		0.48				0.41	0.41	
Clearance Time (s)			6.0	6.0		6.0				5.0	5.0	
Vehicle Extension (s)			3.0	3.0		3.0				3.0	3.0	
Lane Grp Cap (vph)			208	480		574				243	913	
v/s Ratio Prot											0.28	
v/s Ratio Perm			c1.91	0.02		0.83				0.03		
v/c Ratio			3.98	0.05		4.86dl				0.07	0.68	
Uniform Delay, d1			19.5	10.4		19.5				13.3	18.0	
Progression Factor			1.05	1.11		1.00				1.00	1.00	
Incremental Delay, d2			1340.2	0.0		338.3				0.5	4.1	
Delay (s)			1360.7	11.5		357.8				13.8	22.1	
Level of Service			F	B		F				B	C	
Approach Delay (s)			1283.8			357.8					21.9	
Approach LOS			F			F					C	

Intersection Summary

HCM Average Control Delay	439.6	HCM Level of Service	F
HCM Volume to Capacity ratio	2.73		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	188.1%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	NWL	NWT	NWR	NWR2
Lane Configurations	↶	↷	↶	↷
Ideal Flow (vphpl)	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	
Satd. Flow (prot)	1118	1176	1000	
Flt Permitted	0.33	1.00	1.00	
Satd. Flow (perm)	392	1176	1000	
Volume (vph)	199	278	109	460
Peak-hour factor, PHF	0.96	0.96	0.96	0.96
Adj. Flow (vph)	207	290	114	479
RTOR Reduction (vph)	0	0	124	0
Lane Group Flow (vph)	207	290	469	0
Turn Type	Perm		Perm	
Protected Phases		8		
Permitted Phases	8		8	
Actuated Green, G (s)	30.0	30.0	30.0	
Effective Green, g (s)	31.0	31.0	31.0	
Actuated g/C Ratio	0.41	0.41	0.41	
Clearance Time (s)	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	
Lane Grp Cap (vph)	162	486	413	
v/s Ratio Prot		0.25		
v/s Ratio Perm	0.53		0.47	
v/c Ratio	1.28	0.60	1.13	
Uniform Delay, d1	22.0	17.1	22.0	
Progression Factor	1.13	1.03	1.22	
Incremental Delay, d2	129.4	0.5	63.8	
Delay (s)	154.4	18.2	90.6	
Level of Service	F	B	F	
Approach Delay (s)		83.5		
Approach LOS		F		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		1.00	0.86			1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98			0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	1.00	1.00
Satd. Flow (prot)	2168	4026		1118	3954			1124		1118	1176	1000
Flt Permitted	0.95	1.00		0.06	1.00			0.25		0.37	1.00	1.00
Satd. Flow (perm)	2168	4026		68	3954			285		432	1176	1000
Volume (vph)	230	2382	87	132	2349	423	325	378	178	254	451	305
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	242	2507	92	139	2473	445	342	398	187	267	475	321
RTOR Reduction (vph)	0	3	0	0	21	0	0	3	0	0	0	0
Lane Group Flow (vph)	242	2596	0	139	2897	0	0	924	0	267	475	321
Turn Type	Prot		Perm			Perm			Perm		pm+ov	
Protected Phases	5	2			6			4			4	5
Permitted Phases				6			4			4		4
Actuated Green, G (s)	18.3	92.0		69.7	69.7			49.0		49.0	49.0	67.3
Effective Green, g (s)	18.3	92.0		69.7	69.7			50.0		50.0	50.0	68.3
Actuated g/C Ratio	0.12	0.61		0.46	0.46			0.33		0.33	0.33	0.46
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0		5.0	5.0	4.0
Vehicle Extension (s)	1.5	4.0		4.0	4.0			3.0		3.0	3.0	1.5
Lane Grp Cap (vph)	264	2469		32	1837			95		144	392	482
v/s Ratio Prot	0.11	c0.64			0.73						0.40	0.08
v/s Ratio Perm				c2.06				c3.25		0.62		0.24
v/c Ratio	0.92	1.05		4.34	1.58			9.73		1.85	1.21	0.67
Uniform Delay, d1	65.1	29.0		40.1	40.1			50.0		50.0	50.0	31.9
Progression Factor	1.30	0.73		1.00	1.00			1.00		0.94	0.93	1.05
Incremental Delay, d2	5.0	24.3		1574.5	262.2			3949.4		394.2	104.2	1.0
Delay (s)	89.9	45.5		1614.7	302.4			3999.4		441.0	150.8	34.4
Level of Service	F	D		F	F			F		F	F	C
Approach Delay (s)		49.3			362.0			3999.4			188.5	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	653.5	HCM Level of Service	F
HCM Volume to Capacity ratio	5.90		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	203.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑	↗	↖	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.96		1.00	0.98		1.00	1.00	0.55	1.00	1.00	0.79
Flpb, ped/bikes	0.94	1.00		0.98	1.00		0.92	1.00	1.00	0.67	1.00	1.00
Frt	1.00	0.97		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1489	1556		1549	1607		1463	3167	776	1054	3167	1122
Flt Permitted	0.55	1.00		0.31	1.00		0.35	1.00	1.00	0.54	1.00	1.00
Satd. Flow (perm)	861	1556		512	1607		538	3167	776	595	3167	1122
Volume (vph)	48	310	77	173	292	47	126	313	154	10	553	191
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	50	323	80	180	304	49	131	326	160	10	576	199
RTOR Reduction (vph)	0	12	0	0	7	0	0	0	41	0	0	125
Lane Group Flow (vph)	50	391	0	180	346	0	131	326	119	10	576	74
Conf. Peds. (#/hr)	117		216	216		117	196		419	419		196
Conf. Bikes (#/hr)			5			6			8			20
Turn Type	Perm		pm+pt			Perm	pm+ov	Perm		Perm		Perm
Protected Phases		6		5	2		8		5		4	
Permitted Phases	6			2		8		8		4		4
Actuated Green, G (s)	27.6	27.6		37.6	37.6	27.0	27.0	33.5	27.0	27.0	27.0	27.0
Effective Green, g (s)	29.0	29.0		39.0	39.0	28.0	28.0	34.0	28.0	28.0	28.0	28.0
Actuated g/C Ratio	0.39	0.39		0.52	0.52	0.37	0.37	0.45	0.37	0.37	0.37	0.37
Clearance Time (s)	5.4	5.4		3.5	5.4	5.0	5.0	3.5	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	333	602		349	836	201	1182	393	222	1182	419	
v/s Ratio Prot		c0.25		c0.04	0.22		0.10	0.02		0.18		
v/s Ratio Perm	0.06			0.23		c0.24		0.13	0.02		0.07	
v/c Ratio	0.15	0.65		0.52	0.41	0.65	0.28	0.30	0.05	0.49	0.18	
Uniform Delay, d1	15.0	18.8		11.3	11.0	19.5	16.4	13.0	15.0	18.0	15.8	
Progression Factor	0.74	0.80		1.00	1.00	0.95	0.88	1.18	1.00	1.00	1.00	
Incremental Delay, d2	0.9	5.2		1.3	1.5	13.4	0.5	0.4	0.4	1.4	0.9	
Delay (s)	12.0	20.3		12.6	12.5	31.9	14.9	15.7	15.4	19.4	16.7	
Level of Service	B	C		B	B	C	B	B	B	B	B	
Approach Delay (s)		19.4			12.5		18.7			18.7		
Approach LOS		B			B		B			B		

Intersection Summary

HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↕			↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	1.00
Frbp, ped/bikes		1.00	1.00		0.92		1.00	0.92			1.00	0.30
Flpb, ped/bikes		0.98	1.00		0.94		0.85	1.00			0.97	1.00
Frt		1.00	0.85		0.97		1.00	0.98			1.00	0.85
Flt Protected		0.99	1.00		0.99		0.95	1.00			0.99	1.00
Satd. Flow (prot)		1614	1417		1389		1340	2879			3047	420
Flt Permitted		0.87	1.00		0.93		0.23	1.00			0.82	1.00
Satd. Flow (perm)		1416	1417		1306		323	2879			2500	420
Volume (vph)	38	160	121	67	336	124	185	479	58	96	763	61
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	39	165	125	69	346	128	191	494	60	99	787	63
RTOR Reduction (vph)	0	0	125	0	1	0	0	3	0	0	0	4
Lane Group Flow (vph)	0	204	0	0	542	0	191	551	0	0	886	59
Confl. Peds. (#/hr)	570		715	715		570	814		795	795		814
Confl. Bikes (#/hr)			9			12			43			28
Turn Type	Perm		NA	Perm			Perm			Perm		Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		2
Actuated Green, G (s)		30.5	0.0		30.5		34.1	34.1			34.1	34.1
Effective Green, g (s)		32.0	0.0		32.0		35.0	35.0			35.0	35.0
Actuated g/C Ratio		0.43	0.00		0.43		0.47	0.47			0.47	0.47
Clearance Time (s)		5.5			5.5		4.9	4.9			4.9	4.9
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		604	0		557		151	1344			1167	196
v/s Ratio Prot								0.19				
v/s Ratio Perm		0.14			c0.41		c0.59				0.35	0.14
v/c Ratio		0.34	0.00		0.97		1.26	0.41			0.76	0.30
Uniform Delay, d1		14.4	37.5		21.1		20.0	13.2			16.5	12.4
Progression Factor		1.00	1.00		1.00		1.00	1.00			1.75	1.86
Incremental Delay, d2		1.5	0.0		32.0		161.3	0.9			4.2	3.6
Delay (s)		15.9	37.5		53.1		181.3	14.1			33.1	26.7
Level of Service		B	D		D		F	B			C	C
Approach Delay (s)		24.1			53.1			57.0			32.7	
Approach LOS		C			D			E			C	

Intersection Summary			
HCM Average Control Delay	42.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕	↗		↕↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor		0.95			0.95			0.95	1.00		0.95	
Frbp, ped/bikes		0.80			0.98			1.00	0.54		0.98	
Flpb, ped/bikes		1.00			0.97			1.00	1.00		1.00	
Frt		0.90			0.99			1.00	0.85		0.99	
Flt Protected		1.00			0.98			1.00	1.00		1.00	
Satd. Flow (prot)		1591			2055			2235	540		2186	
Flt Permitted		0.91			0.55			1.00	1.00		0.95	
Satd. Flow (perm)		1451			1147			2235	540		2080	
Volume (vph)	22	197	456	303	393	30	0	849	511	5	1137	43
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	22	201	465	309	401	31	0	866	521	5	1160	44
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	102	0	2	0
Lane Group Flow (vph)	0	687	0	0	739	0	0	866	419	0	1207	0
Confl. Peds. (#/hr)	238		195	195		238	518		548	548		518
Confl. Bikes (#/hr)			8			5			23			18
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		
Actuated Green, G (s)		67.5			67.5			72.0	72.0			72.0
Effective Green, g (s)		69.0			69.0			73.0	73.0			73.0
Actuated g/C Ratio		0.46			0.46			0.49	0.49			0.49
Clearance Time (s)		5.5			5.5			5.0	5.0			5.0
Vehicle Extension (s)		3.0			3.0			3.0	3.0			3.0
Lane Grp Cap (vph)		667			528			1088	263			1012
v/s Ratio Prot								0.39				
v/s Ratio Perm		0.47			c0.64				c0.78			0.58
v/c Ratio		1.41dr			2.06dl			0.80	1.59			1.19
Uniform Delay, d1		40.5			40.5			32.3	38.5			38.5
Progression Factor		0.75			1.03			1.55	2.24			1.00
Incremental Delay, d2		19.3			180.8			0.6	269.2			96.8
Delay (s)		49.7			222.5			50.5	355.5			135.3
Level of Service		D			F			D	F			F
Approach Delay (s)		49.7			222.5			165.1				135.3
Approach LOS		D			F			F				F

Intersection Summary

HCM Average Control Delay	147.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.50		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	160.9%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		0.97	0.86		1.00	0.91		1.00	0.86	0.86
Frbp, ped/bikes	1.00	0.95		1.00	0.99		1.00	0.95		1.00	0.98	0.71
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.93	1.00	1.00
Frt	1.00	0.98		1.00	1.00		1.00	0.98		1.00	0.99	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	2168	3773		2168	3985		1118	2997		1044	2956	614
Flt Permitted	0.95	1.00		0.95	1.00		0.06	1.00		0.21	1.00	1.00
Satd. Flow (perm)	2168	3773		2168	3985		75	2997		232	2956	614
Volume (vph)	248	2371	375	58	2741	89	701	1048	154	306	1314	393
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	258	2470	391	60	2855	93	730	1092	160	319	1369	409
RTOR Reduction (vph)	0	19	0	0	3	0	0	13	0	0	4	1
Lane Group Flow (vph)	258	2842	0	60	2945	0	730	1239	0	319	1446	327
Conf. Peds. (#/hr)	264		298	298		264	247		446	446		247
Conf. Bikes (#/hr)			4			3			8			8
Turn Type	Prot			Prot		pm+pt			Perm		pm+ov	
Protected Phases	5	2		1	6	3	8				4	5
Permitted Phases						8			4			4
Actuated Green, G (s)	7.0	46.5		5.0	44.5	83.1	83.1		57.1	57.1	64.1	
Effective Green, g (s)	7.0	48.0		5.0	46.0	85.0	85.0		59.0	59.0	66.0	
Actuated g/C Ratio	0.05	0.32		0.03	0.31	0.57	0.57		0.39	0.39	0.44	
Clearance Time (s)	4.0	5.5		4.0	5.5	4.0	5.9		5.9	5.9	4.0	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	3.0	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	101	1207		72	1222	195	1698		91	1163	287	
v/s Ratio Prot	0.12	c0.75		0.03	c0.74	c0.55	0.41			0.49	0.05	
v/s Ratio Perm						c1.57			1.38		0.48	
v/c Ratio	2.55	2.35		0.83	2.41	3.74	0.73		3.51	1.24	1.14	
Uniform Delay, d1	71.5	51.0		72.1	52.0	50.0	24.0		45.5	45.5	42.0	
Progression Factor	1.21	0.93		1.15	1.21	1.00	1.00		1.09	1.10	1.18	
Incremental Delay, d2	702.1	609.8		7.1	634.8	1247.1	1.4		1130.0	110.1	67.7	
Delay (s)	788.5	657.3		90.3	697.7	1297.1	25.4		1179.7	160.0	117.1	
Level of Service	F	F		F	F	F	C		F	F	F	
Approach Delay (s)		668.2			685.6		493.8			308.4		
Approach LOS		F			F		F			F		

Intersection Summary			
HCM Average Control Delay	565.5	HCM Level of Service	F
HCM Volume to Capacity ratio	3.12		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	197.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.94			0.95		1.00	0.98		1.00	0.98	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1085			1098		1118	2181		1118	2197	
Flt Permitted		0.63			0.71		0.15	1.00		0.15	1.00	
Satd. Flow (perm)		698			788		181	2181		181	2197	
Volume (vph)	117	64	153	351	238	341	60	1280	248	230	1263	161
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	136	74	178	408	277	397	70	1488	288	267	1469	187
RTOR Reduction (vph)	0	6	0	0	6	0	0	27	0	0	16	0
Lane Group Flow (vph)	0	382	0	0	1076	0	70	1749	0	267	1640	0
Turn Type		Perm		Perm		Perm		Perm		Perm		Perm
Protected Phases		4		4		4		2		2		2
Permitted Phases		4		4		2		2		2		2
Actuated Green, G (s)		25.0		25.0		25.6		25.6		25.6		25.6
Effective Green, g (s)		26.0		26.0		26.0		26.0		26.0		26.0
Actuated g/C Ratio		0.43		0.43		0.43		0.43		0.43		0.43
Clearance Time (s)		5.0		5.0		4.4		4.4		4.4		4.4
Vehicle Extension (s)		3.0		3.0		3.0		3.0		3.0		3.0
Lane Grp Cap (vph)		302		341		78		945		78		952
v/s Ratio Prot								0.80				0.75
v/s Ratio Perm		0.55		c1.37		0.39				c1.48		
v/c Ratio		1.27		3.16		0.90		1.85		3.42		1.72
Uniform Delay, d1		17.0		17.0		15.8		17.0		17.0		17.0
Progression Factor		1.00		1.00		0.29		0.28		1.00		1.00
Incremental Delay, d2		143.4		978.0		14.0		383.4		1122.1		329.5
Delay (s)		160.4		995.0		18.6		388.2		1139.1		346.5
Level of Service		F		F		B		F		F		F
Approach Delay (s)		160.4		995.0				374.1				456.5
Approach LOS		F		F				F				F

Intersection Summary

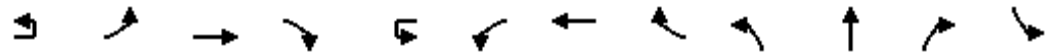
HCM Average Control Delay	516.8	HCM Level of Service	F
HCM Volume to Capacity ratio	3.28		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	211.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘		↗	↘		↗	↕		↗	↘	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	1110		1118	1159		1118	2214		1118	2194	
Flt Permitted	0.43	1.00		0.16	1.00		0.15	1.00		0.15	1.00	
Satd. Flow (perm)	512	1110		188	1159		174	2214		174	2194	
Volume (vph)	148	396	242	75	324	35	91	1520	101	45	1686	237
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	151	404	247	77	331	36	93	1551	103	46	1720	242
RTOR Reduction (vph)	0	3	0	0	6	0	0	8	0	0	18	0
Lane Group Flow (vph)	151	648	0	77	361	0	93	1646	0	46	1944	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		4		4		2		2		2	
Permitted Phases	4		4		2		2		2		2	
Actuated Green, G (s)	23.4	23.4		23.4	23.4		26.5	26.5		26.5	26.5	
Effective Green, g (s)	25.0	25.0		25.0	25.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.45	0.45		0.45	0.45	
Clearance Time (s)	5.6	5.6		5.6	5.6		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	213	463		78	483		78	996		78	987	
v/s Ratio Prot	c0.58		0.31		0.74		c0.89					
v/s Ratio Perm	0.30		0.41		0.53		0.26					
v/c Ratio	0.71	1.40		0.99	0.75		1.19	1.65		0.59	1.97	
Uniform Delay, d1	14.5	17.5		17.3	14.8		16.5	16.5		12.4	16.5	
Progression Factor	0.58	0.53		1.00	1.00		1.56	1.69		0.68	0.70	
Incremental Delay, d2	5.4	186.5		96.8	6.2		116.4	294.8		2.9	436.6	
Delay (s)	13.8	195.8		114.1	21.1		142.3	322.6		11.4	448.2	
Level of Service	B	F		F	C		F	F		B	F	
Approach Delay (s)	161.5		37.2		313.0		438.2					
Approach LOS	F		D		F		F					

Intersection Summary

HCM Average Control Delay	314.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.70		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	170.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔↔	↔↔↔	↔		↔↔	↔↔↔	↔	↔	↔↔		↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		0.97	0.91	1.00		0.97	0.91	1.00	1.00	0.95		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.99		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		3072	4550	1417		3072	4550	1417	1583	3140		1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.09	1.00		0.09
Satd. Flow (perm)		3072	4550	1417		3072	4550	1417	148	3140		148
Volume (vph)	3	329	2033	100	22	263	2015	380	211	1234	72	552
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	3	332	2054	101	22	266	2035	384	213	1246	73	558
RTOR Reduction (vph)	0	0	0	29	0	0	0	21	0	4	0	0
Lane Group Flow (vph)	0	335	2054	72	0	288	2035	363	213	1315	0	558
Turn Type	Prot	Prot		pm+ov	Prot	Prot		pm+ov	pm+pt			pm+pt
Protected Phases	1	1	6	3	5	5	2	7	3	8		7
Permitted Phases				6				2	8			4
Actuated Green, G (s)		17.2	29.1	41.1		16.4	28.3	40.3	54.3	42.3		54.3
Effective Green, g (s)		17.2	30.6	42.6		16.4	29.8	41.8	57.0	45.0		57.0
Actuated g/C Ratio		0.14	0.26	0.36		0.14	0.25	0.35	0.48	0.38		0.48
Clearance Time (s)		4.0	5.5	4.0		4.0	5.5	4.0	4.0	6.7		4.0
Vehicle Extension (s)		3.0	5.0	3.0		3.0	5.0	3.0	3.0	4.0		3.0
Lane Grp Cap (vph)		440	1160	550		420	1130	541	214	1178		214
v/s Ratio Prot		c0.11	c0.45	0.01		0.09	0.45	0.07	0.10	0.42		c0.26
v/s Ratio Perm				0.04				0.19	0.37			c0.98
v/c Ratio		0.76	1.77	0.13		0.69	1.80	0.67	1.00	1.12		2.61
Uniform Delay, d1		49.4	44.7	26.2		49.3	45.1	33.3	56.2	37.5		35.8
Progression Factor		1.51	0.74	0.16		1.59	0.75	0.17	1.00	1.00		1.30
Incremental Delay, d2		0.7	347.1	0.0		0.4	360.7	0.3	59.8	64.4		724.6
Delay (s)		75.1	380.4	4.1		78.9	394.7	6.0	116.0	101.9		771.1
Level of Service		E	F	A		E	F	A	F	F		F
Approach Delay (s)			324.1				305.9			103.8		
Approach LOS			F				F			F		

Intersection Summary			
HCM Average Control Delay	279.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	142.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Ideal Flow (vphpl)	1700	1700
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	3167	1417
Flt Permitted	1.00	1.00
Satd. Flow (perm)	3167	1417
Volume (vph)	1527	106
Peak-hour factor, PHF	0.99	0.99
Adj. Flow (vph)	1542	107
RTOR Reduction (vph)	0	44
Lane Group Flow (vph)	1542	63
Turn Type		Perm
Protected Phases	4	
Permitted Phases		4
Actuated Green, G (s)	42.3	42.3
Effective Green, g (s)	45.0	45.0
Actuated g/C Ratio	0.38	0.38
Clearance Time (s)	6.7	6.7
Vehicle Extension (s)	4.0	4.0
Lane Grp Cap (vph)	1188	531
v/s Ratio Prot	0.49	
v/s Ratio Perm		0.04
v/c Ratio	1.30	0.12
Uniform Delay, d1	37.5	24.5
Progression Factor	1.06	1.18
Incremental Delay, d2	134.7	0.0
Delay (s)	174.3	29.0
Level of Service	F	C
Approach Delay (s)	318.1	
Approach LOS	F	
Intersection Summary		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑↑↑		↔	↑↑↑		↔	↑↑		↔	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.86		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4522		1583	5681		1583	3138		1583	3138	
Flt Permitted	0.14	1.00		0.12	1.00		0.15	1.00		0.13	1.00	
Satd. Flow (perm)	227	4522		200	5681		247	3138		215	3138	
Volume (vph)	56	2272	98	175	3110	202	103	1234	79	272	1480	95
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	58	2367	102	182	3240	210	107	1285	82	283	1542	99
RTOR Reduction (vph)	0	5	0	0	11	0	0	5	0	0	0	0
Lane Group Flow (vph)	58	2464	0	182	3439	0	107	1362	0	283	1641	0
Turn Type	Perm		pm+pt			Perm			pm+pt			
Protected Phases	2		1			6			8			
Permitted Phases	2		6			8			4			
Actuated Green, G (s)	28.4	28.4		41.0	41.0		25.6	25.6		38.6	38.6	
Effective Green, g (s)	29.4	29.4		42.0	42.0		27.0	27.0		40.0	40.0	
Actuated g/C Ratio	0.33	0.33		0.47	0.47		0.30	0.30		0.44	0.44	
Clearance Time (s)	5.0	5.0		3.5	5.0		5.4	5.4		3.5	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	1477		225	2651		74	941		232	1395	
v/s Ratio Prot	c0.54		0.08			c0.61			c0.43			
v/s Ratio Perm	0.26		0.30			0.43			0.42			
v/c Ratio	0.78	1.67		0.81	1.30		1.45	1.45		1.22	1.18	
Uniform Delay, d1	27.4	30.3		20.7	24.0		31.5	31.5		42.7	25.0	
Progression Factor	1.75	1.71		2.13	0.57		0.99	0.97		1.00	1.00	
Incremental Delay, d2	7.4	300.9		2.0	134.1		241.2	205.1		131.3	87.2	
Delay (s)	55.4	352.8		46.1	147.8		272.4	235.6		174.1	112.2	
Level of Service	E	F		D	F		F	F		F	F	
Approach Delay (s)	345.9		142.7			238.3			121.3			
Approach LOS	F		F			F			F			

Intersection Summary

HCM Average Control Delay	206.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	133.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.99
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	4550	1417	1583	3167	1417	1583	3122	3122
Flt Permitted	0.14	1.00	1.00	0.14	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	228	4550	1417	228	4550	1417	1583	3167	1417	1583	3122	3122
Volume (vph)	200	1871	306	337	2185	462	309	818	75	295	1142	119
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	202	1890	309	340	2207	467	312	826	76	298	1154	120
RTOR Reduction (vph)	0	0	7	0	0	41	0	0	1	0	9	0
Lane Group Flow (vph)	202	1890	302	340	2207	426	312	826	75	298	1265	0
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	Prot		pm+ov		Prot	
Protected Phases	1	6	3	5	2	7	3	8	5	7	4	
Permitted Phases	6		6	2		2			8			
Actuated Green, G (s)	33.9	27.4	35.6	33.9	27.4	33.9	8.2	31.5	38.0	6.5	29.8	
Effective Green, g (s)	35.3	29.3	37.0	35.3	29.3	35.3	7.7	32.7	38.7	6.0	31.0	
Actuated g/C Ratio	0.39	0.33	0.41	0.39	0.33	0.39	0.09	0.36	0.43	0.07	0.34	
Clearance Time (s)	3.5	5.9	3.5	3.5	5.9	3.5	3.5	5.2	3.5	3.5	5.2	
Vehicle Extension (s)	3.0	5.0	3.0	3.0	5.0	3.0	3.0	5.0	3.0	3.0	5.0	
Lane Grp Cap (vph)	180	1481	583	180	1481	619	135	1151	672	106	1075	
v/s Ratio Prot	0.07	0.42	0.04	c0.13	0.49	0.05	c0.20	0.26	0.01	c0.19	c0.41	
v/s Ratio Perm	0.37		0.17	c0.62		0.25			0.05			
v/c Ratio	1.12	1.28	0.52	1.89	1.49	0.69	2.31	0.72	0.11	2.81	1.18	
Uniform Delay, d1	26.1	30.4	19.8	26.1	30.4	22.8	41.1	24.7	15.4	42.0	29.5	
Progression Factor	0.93	0.70	0.77	1.00	1.00	1.00	1.00	1.00	1.00	1.28	1.10	
Incremental Delay, d2	62.3	124.8	0.1	420.2	224.2	3.2	612.6	2.7	0.1	817.5	80.7	
Delay (s)	86.6	146.0	15.4	446.3	254.6	26.0	653.8	27.4	15.4	871.2	113.2	
Level of Service	F	F	B	F	F	C	F	C	B	F	F	
Approach Delay (s)		124.2			240.8			187.6			256.9	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	201.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	133.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 92: Le Conte Ave & Gayley Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↖↗		↖	↖↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.95		1.00	1.00	0.75	1.00	0.86		1.00	0.99	
Flpb, ped/bikes	0.83	1.00		0.66	1.00	1.00	0.94	1.00		0.88	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.91		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1320	1554		1041	1667	1062	1496	2485		1400	3125	
Flt Permitted	0.54	1.00		0.70	1.00	1.00	0.20	1.00		0.46	1.00	
Satd. Flow (perm)	752	1554		766	1667	1062	318	2485		671	3125	
Volume (vph)	9	74	10	287	193	85	107	206	270	139	1015	26
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	10	79	11	305	205	90	114	219	287	148	1080	28
RTOR Reduction (vph)	0	6	0	0	0	65	0	38	0	0	2	0
Lane Group Flow (vph)	10	84	0	305	205	25	114	468	0	148	1106	0
Conf. Peds. (#/hr)	212		207	207		212	177		203	203		177
Conf. Bikes (#/hr)			13			9			15			12
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4	2			2		
Actuated Green, G (s)	20.2	20.2		20.2	20.2	20.2	45.3	45.3		45.3	45.3	
Effective Green, g (s)	21.0	21.0		21.0	21.0	21.0	46.0	46.0		46.0	46.0	
Actuated g/C Ratio	0.28	0.28		0.28	0.28	0.28	0.61	0.61		0.61	0.61	
Clearance Time (s)	4.8	4.8		4.8	4.8	4.8	4.7	4.7		4.7	4.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	211	435		214	467	297	195	1524		412	1917	
v/s Ratio Prot		0.05			0.12			0.19			0.35	
v/s Ratio Perm	0.01			c0.40		0.02	c0.36			0.22		
v/c Ratio	0.05	0.19		1.43	0.44	0.08	0.58	0.31		0.36	0.58	
Uniform Delay, d1	19.7	20.5		27.0	22.2	19.9	8.7	6.9		7.2	8.7	
Progression Factor	1.00	1.00		1.01	1.00	1.23	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	1.0		214.2	2.7	0.5	12.2	0.5		2.4	1.3	
Delay (s)	20.1	21.5		241.5	25.0	25.1	20.9	7.4		9.6	9.9	
Level of Service	C	C		F	C	C	C	A		A	A	
Approach Delay (s)		21.4			135.1			9.9			9.9	
Approach LOS		C			F			A			A	

Intersection Summary			
HCM Average Control Delay	39.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕↕	↕	↕	↕↕	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes		0.99		1.00	0.86		1.00	1.00	0.72	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		0.98	1.00	1.00	0.93	1.00	
Frt		0.93		1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1069		1118	860		1095	2235	722	1043	2234	
Flt Permitted		0.99		0.76	1.00		0.16	1.00	1.00	0.26	1.00	
Satd. Flow (perm)		1069		888	860		184	2235	722	286	2234	
Volume (vph)	1	1	2	222	8	234	3	814	155	489	1067	2
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1	1	2	227	8	239	3	831	158	499	1089	2
RTOR Reduction (vph)	0	2	0	0	161	0	0	0	82	0	0	0
Lane Group Flow (vph)	0	2	0	227	86	0	3	831	76	499	1091	0
Conf. Peds. (#/hr)	82						82	77		239	239	77
Conf. Bikes (#/hr)			2			6			9			5
Turn Type	Split			Perm			Perm			Perm custom		
Protected Phases	3	3			4			6			6	
Permitted Phases				4			6		6	2	2	
Actuated Green, G (s)		1.3		23.4	23.4		35.7	35.7	35.7	35.7	35.7	
Effective Green, g (s)		2.3		24.4	24.4		36.3	36.3	36.3	36.3	36.3	
Actuated g/C Ratio		0.03		0.33	0.33		0.48	0.48	0.48	0.48	0.48	
Clearance Time (s)		5.0		5.0	5.0		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		33		289	280		89	1082	349	138	1081	
v/s Ratio Prot		c0.00			0.10			0.37				
v/s Ratio Perm				c0.26			0.02		0.11	c1.75	0.49	
v/c Ratio		0.06		0.79	0.31		0.03	0.77	0.22	3.62	1.01	
Uniform Delay, d1		35.3		22.9	19.0		10.2	15.9	11.2	19.4	19.4	
Progression Factor		1.00		1.63	4.74		0.96	1.17	1.99	1.00	1.00	
Incremental Delay, d2		0.8		1.3	0.1		0.1	0.5	0.1	1194.9	29.7	
Delay (s)		36.1		38.8	89.9		9.8	19.1	22.3	1214.3	49.0	
Level of Service		D		D	F		A	B	C	F	D	
Approach Delay (s)		36.1			65.4			19.6			414.7	
Approach LOS		D			E			B			F	

Intersection Summary			
HCM Average Control Delay	232.0	HCM Level of Service	F
HCM Volume to Capacity ratio	2.38		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	117.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		1.00	0.86		1.00	0.95	1.00	1.00	1.00	0.88
Frbp, ped/bikes	1.00	0.97		1.00	0.97		1.00	1.00	0.68	1.00	1.00	0.79
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00	1.00	0.79	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3871		1111	3898		1118	2235	683	885	1176	1394
Flt Permitted	0.95	1.00		0.06	1.00		0.10	1.00	1.00	0.58	1.00	1.00
Satd. Flow (perm)	2168	3871		75	3898		115	2235	683	538	1176	1394
Volume (vph)	347	2611	172	44	3456	297	358	272	84	259	499	564
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	361	2720	179	46	3600	309	373	283	88	270	520	588
RTOR Reduction (vph)	0	6	0	0	9	0	0	0	1	0	0	0
Lane Group Flow (vph)	361	2893	0	46	3900	0	373	283	87	270	520	588
Conf. Peds. (#/hr)	208		257	257		208	342		237	237		342
Conf. Bikes (#/hr)			4			9			6			5
Turn Type	Prot			Perm			pm+pt		Perm	Perm		pm+ov
Protected Phases	1	6			2		3	8			4	1
Permitted Phases				2			8		8	4		4
Actuated Green, G (s)	25.0	90.0		61.0	61.0		49.2	49.2	49.2	35.2	35.2	60.2
Effective Green, g (s)	25.0	91.0		62.0	62.0		51.0	51.0	51.0	37.0	37.0	62.0
Actuated g/C Ratio	0.17	0.61		0.41	0.41		0.34	0.34	0.34	0.25	0.25	0.41
Clearance Time (s)	4.0	5.0		5.0	5.0		4.0	5.8	5.8	5.8	5.8	4.0
Vehicle Extension (s)	2.0	4.0		4.0	4.0		2.0	3.0	3.0	3.0	3.0	2.0
Lane Grp Cap (vph)	361	2348		31	1611		106	760	232	133	290	613
v/s Ratio Prot	0.17	c0.75			c1.00		c0.23	0.13			0.44	0.16
v/s Ratio Perm				0.61			c0.96		0.13	0.50		0.26
v/c Ratio	1.00	1.23		1.48	2.42		3.52	0.37	0.38	2.03	1.79	0.96
Uniform Delay, d1	62.5	29.5		44.0	44.0		72.2	37.4	37.5	56.5	56.5	42.8
Progression Factor	0.85	1.52		0.47	0.49		1.00	1.00	1.00	0.91	0.91	1.06
Incremental Delay, d2	14.2	104.8		232.7	639.6		1156.7	0.3	1.0	476.5	363.8	16.6
Delay (s)	67.2	149.5		253.4	661.2		1228.9	37.7	38.5	528.1	415.3	62.0
Level of Service	E	F		F	F		F	D	D	F	F	E
Approach Delay (s)		140.4			656.5			635.0			286.6	
Approach LOS		F			F			F			F	

Intersection Summary
































HCM Average Control Delay	420.0	HCM Level of Service	F
HCM Volume to Capacity ratio	2.59		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	189.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑		↖		↖		↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0			
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00			
Frt		0.99		1.00	1.00		1.00		0.85			
Flt Protected		1.00		0.95	1.00		0.95		1.00			
Satd. Flow (prot)		3119		1583	3167		1583		1417			
Flt Permitted		1.00		0.10	1.00		0.76		1.00			
Satd. Flow (perm)		3119		164	3167		1262		1417			
Volume (vph)	0	1419	157	744	1690	0	382	0	894	0	0	0
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1463	162	767	1742	0	394	0	922	0	0	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	326	0	0	0
Lane Group Flow (vph)	0	1618	0	767	1742	0	394	0	596	0	0	0
Turn Type				pm+pt		custom		Over	Perm			
Protected Phases		2		1	6			1			4	
Permitted Phases				6			8			4		
Actuated Green, G (s)		35.6		81.0	81.0		30.0		41.4			
Effective Green, g (s)		36.6		82.0	82.0		30.0		41.4			
Actuated g/C Ratio		0.31		0.68	0.68		0.25		0.34			
Clearance Time (s)		5.0		4.0	5.0		4.0		4.0			
Vehicle Extension (s)		4.0		3.0	3.0		3.0		3.0			
Lane Grp Cap (vph)		951		602	2164		316		489			
v/s Ratio Prot		c0.52		c0.44	0.55				0.42			
v/s Ratio Perm				0.43			c0.31					
v/c Ratio		1.70		1.27	0.80		1.25		1.22			
Uniform Delay, d1		41.7		41.5	13.4		45.0		39.3			
Progression Factor		1.00		0.95	0.96		1.00		1.00			
Incremental Delay, d2		320.2		133.4	2.6		134.8		116.3			
Delay (s)		361.9		172.7	15.4		179.8		155.6			
Level of Service		F		F	B		F		F			
Approach Delay (s)		361.9			63.5			162.8			0.0	
Approach LOS		F			E			F			A	

Intersection Summary

HCM Average Control Delay	176.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	129.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			




























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  			 			 	 
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.86		0.97	0.86		1.00	0.95	1.00	1.00	0.95	0.88
Frbp, ped/bikes	1.00	0.97		1.00	0.99		1.00	1.00	0.93	1.00	1.00	0.90
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2168	3874		2168	3922		1118	2235	929	1107	2235	1587
Flt Permitted	0.95	1.00		0.95	1.00		0.13	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)	2168	3874		2168	3922		151	2235	929	201	2235	1587
Volume (vph)	287	2869	240	17	3617	688	257	818	295	154	722	1110
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	312	3118	261	18	3932	748	279	889	321	167	785	1207
RTOR Reduction (vph)	0	9	0	0	15	0	0	0	0	0	0	1
Lane Group Flow (vph)	312	3370	0	18	4665	0	279	889	321	167	785	1206
Conf. Peds. (#/hr)	16		141	141		16	73		33	33		73
Conf. Bikes (#/hr)			14			12			27			14
Turn Type	Prot			Prot		pm+pt		pm+ov	Perm		pm+ov	
Protected Phases	5	2		1	6	3	8	1		4	4	5
Permitted Phases						8		8	4			4
Actuated Green, G (s)	16.0	77.5		5.0	66.5	51.1	51.1	56.1	42.1	42.1	58.1	
Effective Green, g (s)	16.0	79.0		5.0	68.0	54.0	54.0	59.0	45.0	45.0	61.0	
Actuated g/C Ratio	0.11	0.53		0.03	0.45	0.36	0.36	0.39	0.30	0.30	0.41	
Clearance Time (s)	4.0	5.5		4.0	5.5	4.0	6.9	4.0	6.9	6.9	4.0	
Vehicle Extension (s)	1.0	4.0		1.0	4.0	3.0	2.0	1.0	2.0	2.0	1.0	
Lane Grp Cap (vph)	231	2040		72	1778	87	805	390	60	671	645	
v/s Ratio Prot	0.14	c0.87		0.01	c1.19	c0.11	0.40	0.03		0.35	0.20	
v/s Ratio Perm						c1.05		0.32	0.83		0.56	
v/c Ratio	1.35	1.65		0.25	2.62	3.21	1.10	0.82	2.78	1.17	1.87	
Uniform Delay, d1	67.0	35.5		70.7	41.0	47.9	48.0	40.8	52.5	52.5	44.5	
Progression Factor	0.68	0.40		1.30	0.47	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	160.4	293.7		0.1	730.8	1022.3	64.3	12.5	846.9	91.8	397.6	
Delay (s)	206.3	307.9		92.1	750.0	1070.2	112.3	53.4	899.4	144.3	442.1	
Level of Service	F	F		F	F	F	F	D	F	F	F	
Approach Delay (s)		299.3			747.5		279.1			369.2		
Approach LOS		F			F		F			F		
Intersection Summary												
HCM Average Control Delay	484.3		HCM Level of Service				F					
HCM Volume to Capacity ratio	2.67											
Actuated Cycle Length (s)	150.0				Sum of lost time (s)				8.0			
Intersection Capacity Utilization	200.5%				ICU Level of Service				H			
Analysis Period (min)	15											
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖↖	↑↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.86		0.97	0.81		1.00	0.95		1.00	0.95	
Fr _t	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.99	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1118	4006		2168	4712		1118	2176		1118	2206	
Fl _t Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1118	4006		2168	4712		1118	2176		1118	2206	
Volume (vph)	119	2524	181	498	3077	247	66	1237	264	296	1057	100
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	124	2629	189	519	3205	257	69	1289	275	308	1101	104
RTOR Reduction (vph)	0	7	0	0	10	0	0	12	0	0	5	0
Lane Group Flow (vph)	124	2811	0	519	3452	0	69	1552	0	308	1200	0
Turn Type	Prot		Prot		Prot		Prot		Prot			
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	12.0	63.2		21.0	72.2		10.9	33.0		13.3	35.4	
Effective Green, g (s)	12.0	64.7		21.0	73.7		10.9	35.0		13.3	37.4	
Actuated g/C Ratio	0.08	0.43		0.14	0.49		0.07	0.23		0.09	0.25	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	1.0	4.0		1.0	4.0		1.0	4.0		1.0	4.0	
Lane Grp Cap (vph)	89	1728		304	2315		81	508		99	550	
v/s Ratio Prot	0.11	c0.70		c0.24	0.73		0.06	c0.71		c0.28	0.54	
v/s Ratio Perm												
v/c Ratio	1.39	1.63		1.71	1.49		0.85	3.05		3.11	2.18	
Uniform Delay, d ₁	69.0	42.6		64.5	38.1		68.8	57.5		68.3	56.3	
Progression Factor	1.04	0.92		0.75	0.58		1.00	1.00		1.00	1.00	
Incremental Delay, d ₂	183.2	282.2		319.5	221.3		52.3	929.8		976.1	538.2	
Delay (s)	255.2	321.5		368.2	243.3		121.0	987.3		1044.4	594.5	
Level of Service	F	F		F	F		F	F		F	F	
Approach Delay (s)		318.7			259.5			950.7			686.1	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	453.0	HCM Level of Service	F
HCM Volume to Capacity ratio	2.16		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	192.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	4498		1583	4550	1417	1583	3167	1417	1583	3126	
Flt Permitted	0.12	1.00		0.95	1.00	1.00	0.11	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	208	4498		1583	4550	1417	185	3167	1417	185	3126	
Volume (vph)	120	2145	176	146	3185	194	45	1446	121	94	1177	110
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	122	2189	180	149	3250	198	46	1476	123	96	1201	112
RTOR Reduction (vph)	0	10	0	0	0	3	0	0	32	0	0	0
Lane Group Flow (vph)	122	2359	0	149	3250	195	46	1476	91	96	1313	0
Turn Type	Perm			Prot		Perm	Perm		Perm	Perm		
Protected Phases	8			7		4		6			2	
Permitted Phases	8					4	6			6	2	
Actuated Green, G (s)	31.1	31.1		10.4	45.0	45.0	35.0	35.0	35.0	35.0	35.0	
Effective Green, g (s)	32.1	32.1		9.9	46.0	46.0	36.0	36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.36	0.36		0.11	0.51	0.51	0.40	0.40	0.40	0.40	0.40	
Clearance Time (s)	5.0	5.0		3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	74	1604		174	2326	724	74	1267	567	74	1250	
v/s Ratio Prot		0.52		0.09	c0.71			0.47			0.42	
v/s Ratio Perm	c0.59					0.14	0.25		0.06	c0.52		
v/c Ratio	1.65	1.47		0.86	1.40	0.27	0.62	1.16	0.16	1.30	1.05	
Uniform Delay, d1	28.9	28.9		39.4	22.0	12.5	21.6	27.0	17.3	27.0	27.0	
Progression Factor	0.82	0.81		1.07	0.56	0.22	0.98	0.92	1.17	1.00	1.00	
Incremental Delay, d2	334.0	214.4		4.0	179.0	0.1	3.5	75.1	0.1	203.5	39.8	
Delay (s)	357.8	237.9		46.3	191.3	2.9	24.7	100.0	20.2	230.5	66.8	
Level of Service	F	F		D	F	A	C	F	C	F	E	
Approach Delay (s)	243.7			175.0				92.0			77.9	
Approach LOS	F			F				F			E	
Intersection Summary												
HCM Average Control Delay	163.8			HCM Level of Service		F						
HCM Volume to Capacity ratio	1.48											
Actuated Cycle Length (s)	90.0			Sum of lost time (s)		12.0						
Intersection Capacity Utilization	143.5%			ICU Level of Service		H						
Analysis Period (min)	15											
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑↑		↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	1583	4511		1583	3123		1583	3167	1417
Flt Permitted	0.18	1.00	1.00	0.15	1.00		0.95	1.00		0.11	1.00	1.00
Satd. Flow (perm)	303	4550	1417	256	4511		1583	3123		185	3167	1417
Volume (vph)	105	1833	220	222	2003	122	255	1637	166	146	1433	112
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	106	1852	222	224	2023	123	258	1654	168	147	1447	113
RTOR Reduction (vph)	0	0	10	0	7	0	0	9	0	0	0	12
Lane Group Flow (vph)	106	1852	213	224	2139	0	258	1813	0	147	1447	101
Turn Type	Perm		pm+ov	pm+pt			Prot			Perm		Perm
Protected Phases		6	3	5	2		3	8			4	
Permitted Phases	6		6	2						4		4
Actuated Green, G (s)	20.5	20.5	32.0	29.5	29.5		11.5	50.5		35.5	35.5	35.5
Effective Green, g (s)	22.0	22.0	33.0	31.0	31.0		11.0	51.0		36.0	36.0	36.0
Actuated g/C Ratio	0.24	0.24	0.37	0.34	0.34		0.12	0.57		0.40	0.40	0.40
Clearance Time (s)	5.5	5.5	3.5	3.0	5.5		3.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	2.0	3.0	3.0		2.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	1112	583	162	1554		193	1770		74	1267	567
v/s Ratio Prot		c0.41	0.04	0.08	c0.47		c0.16	0.58			0.46	
v/s Ratio Perm	0.35		0.11	0.40						c0.79		0.07
v/c Ratio	1.43	1.67	0.36	1.38	1.38		1.34	1.02		1.99	1.14	0.18
Uniform Delay, d1	34.0	34.0	20.8	44.7	29.5		39.5	19.5		27.0	27.0	17.4
Progression Factor	1.00	1.00	1.00	1.62	1.51		1.00	1.00		1.45	1.45	1.60
Incremental Delay, d2	255.9	303.5	0.1	175.8	169.7		182.3	27.9		457.6	67.1	0.2
Delay (s)	289.9	337.5	21.0	248.1	214.1		221.8	47.4		496.7	106.2	28.1
Level of Service	F	F	C	F	F		F	D		F	F	C
Approach Delay (s)		302.9			217.4			69.0			134.7	
Approach LOS		F			F			E			F	

Intersection Summary

HCM Average Control Delay	185.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	133.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗	↖	↖	↖↗	↖	↖↗	↖↗	↖↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	0.86	0.86	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (prot)	1303	3728		1304	3747	1129	1304	2608	1137	2243	2284	
Flt Permitted	0.07	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (perm)	94	3728		1304	3747	1129	1304	2608	1137	2243	2284	
Volume (vph)	22	1527	40	45	1761	1252	139	312	254	1011	217	7
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	22	1558	41	46	1797	1278	142	318	259	1032	221	7
RTOR Reduction (vph)	0	2	0	0	0	353	0	0	0	0	1	0
Lane Group Flow (vph)	22	1597	0	46	1797	925	142	318	259	688	571	0
Conf. Peds. (#/hr)	11		9	9		11	58		11	11		58
Conf. Bikes (#/hr)			6			8			10			4
Turn Type	Perm		Prot		Perm	Split	pm+ov		Split			
Protected Phases	6		5		2	3	3	5	4		4	
Permitted Phases	6				2			3				
Actuated Green, G (s)	59.5	59.5	10.0		73.5	73.5	21.5	21.5	31.5	40.0	40.0	
Effective Green, g (s)	60.5	60.5	10.0		74.5	74.5	22.5	22.5	32.5	41.0	41.0	
Actuated g/C Ratio	0.40	0.40	0.07		0.50	0.50	0.15	0.15	0.22	0.27	0.27	
Clearance Time (s)	5.0	5.0	4.0		5.0	5.0	5.0	5.0	4.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0	2.0		4.0	4.0	2.0	2.0	2.0	4.0	4.0	
Lane Grp Cap (vph)	38	1504	87		1861	561	196	391	246	613	624	
v/s Ratio Prot		0.43	0.04		0.48		0.11	0.12	c0.07	c0.31	0.25	
v/s Ratio Perm	0.24					c0.82			0.16			
v/c Ratio	0.58	1.06	0.53		0.97	1.65	0.72	0.81	1.05	1.12	1.06dl	
Uniform Delay, d1	34.8	44.8	67.7		36.5	37.8	60.8	61.7	58.8	54.5	52.8	
Progression Factor	1.69	1.70	1.18		0.98	3.84	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	39.5	38.7	0.2		2.1	292.4	10.7	11.6	72.0	74.9	18.4	
Delay (s)	98.4	114.7	80.3		38.0	437.3	71.5	73.3	130.7	129.4	71.2	
Level of Service	F	F	F		D	F	E	E	F	F	E	
Approach Delay (s)		114.5			202.1			93.6			103.0	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	150.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	145.2%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑	↗		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	0.98		1.00	1.00	0.85		0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.99	
Satd. Flow (prot)	1583	4478		1583	3167	1417		1655			3112	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.90			0.56	
Satd. Flow (perm)	1583	4478		1583	3167	1417		1497			1757	
Volume (vph)	181	972	114	90	1113	152	10	878	47	182	561	29
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	191	1023	120	95	1172	160	11	924	49	192	591	31
RTOR Reduction (vph)	0	13	0	0	0	90	0	1	0	0	4	0
Lane Group Flow (vph)	191	1130	0	95	1172	70	0	983	0	0	810	0
Turn Type	Prot			Prot		Perm	Prot				Prot	
Protected Phases	1	6		5	2		3	8			7	4
Permitted Phases						2						
Actuated Green, G (s)	12.8	43.4		8.3	38.9	38.9		26.0			26.0	
Effective Green, g (s)	12.8	43.7		8.3	39.2	39.2		26.0			26.0	
Actuated g/C Ratio	0.14	0.49		0.09	0.44	0.44		0.29			0.29	
Clearance Time (s)	4.0	4.3		4.0	4.3	4.3		4.0			4.0	
Vehicle Extension (s)	3.0	5.7		3.0	5.5	5.5		3.0			3.0	
Lane Grp Cap (vph)	225	2174		146	1379	617		432			508	
v/s Ratio Prot	c0.12	0.25		0.06	c0.37							
v/s Ratio Perm						0.05		c0.66			0.46	
v/c Ratio	0.85	0.52		0.65	0.85	0.11		2.27			38.40dl	
Uniform Delay, d1	37.7	15.9		39.5	22.8	15.1		32.0			32.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	24.6	0.9		9.9	6.7	0.4		580.9			277.1	
Delay (s)	62.2	16.8		49.4	29.5	15.4		612.9			309.1	
Level of Service	E	B		D	C	B		F			F	
Approach Delay (s)		23.3			29.2			612.9			309.1	
Approach LOS		C			C			F			F	

Intersection Summary

HCM Average Control Delay	203.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	138.6%	ICU Level of Service	H
Analysis Period (min)	15		
dl	Defacto Left Lane. Recode with 1 though lane as a left lane.		
dr	Defacto Right Lane. Recode with 1 though lane as a right lane.		
c	Critical Lane Group		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑	↗	↗	↑↑	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.87	1.00	0.97	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		0.95	1.00	1.00	0.91	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	3730		1296	3740		1235	2608	1013	1189	2471	
Flt Permitted	0.07	1.00		0.11	1.00		0.21	1.00	1.00	0.60	1.00	
Satd. Flow (perm)	97	3730		146	3740		275	2608	1013	750	2471	
Volume (vph)	607	1543	26	75	1834	10	111	186	2	37	560	85
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	632	1607	27	78	1910	10	116	194	2	39	583	89
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	1	0	8	0
Lane Group Flow (vph)	632	1633	0	78	1920	0	116	194	1	39	664	0
Conf. Peds. (#/hr)	63		61	61		63	79		72	72		79
Conf. Bikes (#/hr)			9			13			4			9
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		6			2			8				4
Permitted Phases	6			2			8		8		4	
Actuated Green, G (s)	95.5	95.5		95.5	95.5		46.0	46.0	46.0	46.0	46.0	
Effective Green, g (s)	96.0	96.0		96.0	96.0		46.0	46.0	46.0	46.0	46.0	
Actuated g/C Ratio	0.64	0.64		0.64	0.64		0.31	0.31	0.31	0.31	0.31	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	62	2387		93	2394		84	800	311	230	758	
v/s Ratio Prot		0.44			0.51			0.07			0.27	
v/s Ratio Perm	c6.54			0.53			c0.42		0.00	0.05		
v/c Ratio	10.19	0.68		0.84	0.80		1.38	0.24	0.00	0.17	0.88	
Uniform Delay, d1	27.0	17.3		21.0	20.0		52.0	38.9	36.1	38.0	49.3	
Progression Factor	1.00	1.00		1.57	1.68		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4169.0	1.6		27.3	1.1		229.5	0.7	0.0	1.6	13.5	
Delay (s)	4196.0	18.9		60.2	34.6		281.5	39.7	36.1	39.6	62.8	
Level of Service	F	B		E	C		F	D	D	D	E	
Approach Delay (s)		1183.9			35.6			129.5			61.5	
Approach LOS		F			D			F			E	

Intersection Summary

HCM Average Control Delay	536.8	HCM Level of Service	F
HCM Volume to Capacity ratio	7.33		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	141.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.97			0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1609			1634		1583	1657		1583	1667	1417
Flt Permitted		0.95			0.90		0.30	1.00		0.36	1.00	1.00
Satd. Flow (perm)		1530			1481		493	1657		599	1667	1417
Volume (vph)	66	388	125	19	138	18	93	494	20	93	597	159
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	69	404	130	20	144	19	97	515	21	97	622	166
RTOR Reduction (vph)	0	16	0	0	7	0	0	2	0	0	0	75
Lane Group Flow (vph)	0	587	0	0	176	0	97	534	0	97	622	91
Turn Type		Perm		Perm		Perm		Perm		Perm		Perm
Protected Phases		8		4		4		2		6		6
Permitted Phases		8		4		2		6		6		6
Actuated Green, G (s)		18.5		18.5		32.7		32.7		32.7		32.7
Effective Green, g (s)		19.0		19.0		33.0		33.0		33.0		33.0
Actuated g/C Ratio		0.32		0.32		0.55		0.55		0.55		0.55
Clearance Time (s)		4.5		4.5		4.3		4.3		4.3		4.3
Vehicle Extension (s)		3.0		3.0		3.0		3.0		3.0		3.0
Lane Grp Cap (vph)		485		469		271		911		329		779
v/s Ratio Prot								0.32				c0.37
v/s Ratio Perm		c0.38		0.12		0.20				0.16		0.06
v/c Ratio		1.21		0.38		0.36		0.59		0.29		0.12
Uniform Delay, d1		20.5		15.9		7.6		9.0		7.3		6.5
Progression Factor		1.00		1.00		1.00		0.88		1.00		1.00
Incremental Delay, d2		112.3		0.5		1.8		1.4		2.3		0.3
Delay (s)		132.8		16.4		9.4		9.3		9.5		6.8
Level of Service		F		B		A		A		A		B
Approach Delay (s)		132.8		16.4		9.3				12.0		
Approach LOS		F		B		A				B		

Intersection Summary

HCM Average Control Delay	43.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖		↖	↖↖↖		↖	↖	↖	↖	↖	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	3698		1304	3718		1304	1373	1167	1304	1369	
Flt Permitted	0.17	1.00		0.17	1.00		0.29	1.00	1.00	0.31	1.00	
Satd. Flow (perm)	239	3698		239	3718		399	1373	1167	424	1369	
Volume (vph)	41	1575	150	117	1628	87	98	536	109	94	547	10
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	42	1607	153	119	1661	89	100	547	111	96	558	10
RTOR Reduction (vph)	0	19	0	0	10	0	0	0	2	0	1	0
Lane Group Flow (vph)	42	1742	0	119	1740	0	100	547	109	96	567	0
Turn Type	Perm		Perm		Perm		Perm		Perm	Perm		
Protected Phases	2		2		2		4		4	4		
Permitted Phases	2		2		2		4		4	4		
Actuated Green, G (s)	22.4	22.4		22.4	22.4		28.0	28.0	28.0	28.0	28.0	
Effective Green, g (s)	23.0	23.0		23.0	23.0		29.0	29.0	29.0	29.0	29.0	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.48	0.48	0.48	0.48	0.48	
Clearance Time (s)	4.6	4.6		4.6	4.6		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)	92	1418		92	1425		193	664	564	205	662	
v/s Ratio Prot		0.47			0.47			0.40			c0.41	
v/s Ratio Perm	0.18			c0.50			0.25		0.09	0.23		
v/c Ratio	0.46	1.23		1.29	1.22		0.52	0.82	0.19	0.47	0.86	
Uniform Delay, d1	13.8	18.5		18.5	18.5		10.7	13.3	8.8	10.4	13.7	
Progression Factor	1.00	1.00		1.53	1.56		1.00	1.00	1.00	0.60	0.72	
Incremental Delay, d2	15.5	109.1		175.3	104.0		9.6	11.1	0.8	4.8	9.0	
Delay (s)	29.3	127.6		203.5	132.7		20.3	24.4	9.6	11.0	18.7	
Level of Service	C	F		F	F		C	C	A	B	B	
Approach Delay (s)		125.3			137.3			21.7			17.6	
Approach LOS		F			F			C			B	

Intersection Summary

HCM Average Control Delay	100.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	129.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑	↗	↘	↑↑		↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.86	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	4411		1583	5733	1417	1583	3064		1583	3167	1417
Flt Permitted	0.10	1.00		0.10	1.00	1.00	0.13	1.00		0.13	1.00	1.00
Satd. Flow (perm)	167	4411		167	5733	1417	215	3064		216	3167	1417
Volume (vph)	118	1216	311	211	1891	333	176	690	191	267	1144	62
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	123	1267	324	220	1970	347	183	719	199	278	1192	65
RTOR Reduction (vph)	0	50	0	0	0	32	0	18	0	0	0	12
Lane Group Flow (vph)	123	1541	0	220	1970	315	183	900	0	278	1192	53
Turn Type	Perm			Perm		pm+ov	pm+pt			pm+pt		Perm
Protected Phases		6			2	7	3	8		7	4	
Permitted Phases	6			2		2	8			4		4
Actuated Green, G (s)	39.0	39.0		39.0	39.0	46.0	35.1	29.1		37.1	30.1	30.1
Effective Green, g (s)	40.0	40.0		40.0	40.0	47.0	37.0	31.0		39.0	32.0	32.0
Actuated g/C Ratio	0.44	0.44		0.44	0.44	0.52	0.41	0.34		0.43	0.36	0.36
Clearance Time (s)	5.0	5.0		5.0	5.0	4.0	4.0	5.9		4.0	5.9	5.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	74	1960		74	2548	803	180	1055		200	1126	504
v/s Ratio Prot		0.35			0.34	0.03	0.07	0.29		c0.11	0.38	
v/s Ratio Perm	0.74			c1.32		0.19	0.35			c0.49		0.04
v/c Ratio	1.66	0.79		2.97	0.77	0.39	1.02	0.85		1.39	1.06	0.10
Uniform Delay, d1	25.0	21.3		25.0	21.2	12.9	24.0	27.4		20.6	29.0	19.4
Progression Factor	1.00	1.00		1.04	1.02	1.66	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	350.0	3.3		891.1	0.2	0.0	71.5	8.8		203.2	43.8	0.4
Delay (s)	375.0	24.6		917.2	21.9	21.4	95.5	36.2		223.8	72.8	19.8
Level of Service	F	C		F	C	C	F	D		F	E	B
Approach Delay (s)		49.8			99.4			46.0			97.9	
Approach LOS		D			F			D			F	

Intersection Summary

HCM Average Control Delay	78.2	HCM Level of Service	E
HCM Volume to Capacity ratio	2.11		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	106.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



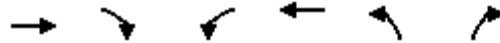
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↵	↑↑↑	↵	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	0.99		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3702		1304	3747	1282	
Flt Permitted	1.00		0.07	1.00	0.96	
Satd. Flow (perm)	3702		98	3747	1282	
Volume (vph)	1985	172	69	1924	235	67
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	2068	179	72	2004	245	70
RTOR Reduction (vph)	9	0	0	0	4	0
Lane Group Flow (vph)	2238	0	72	2004	311	0
Turn Type			Perm			
Protected Phases	6			2	4	
Permitted Phases			2			
Actuated Green, G (s)	56.2		56.2	56.2	25.0	
Effective Green, g (s)	56.3		56.3	56.3	25.7	
Actuated g/C Ratio	0.63		0.63	0.63	0.29	
Clearance Time (s)	4.1		4.1	4.1	4.7	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2316		61	2344	366	
v/s Ratio Prot	0.60			0.53	c0.24	
v/s Ratio Perm			c0.74			
v/c Ratio	0.97		1.18	0.85	0.85	
Uniform Delay, d1	15.9		16.9	13.6	30.3	
Progression Factor	0.49		1.00	1.00	1.00	
Incremental Delay, d2	8.9		172.2	4.2	16.5	
Delay (s)	16.7		189.0	17.8	46.9	
Level of Service	B		F	B	D	
Approach Delay (s)	16.7			23.8	46.9	
Approach LOS	B			C	D	
Intersection Summary						
HCM Average Control Delay			21.9		HCM Level of Service	C
HCM Volume to Capacity ratio			1.07			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			98.8%		ICU Level of Service	F
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑			↕			↖	↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00			1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99			0.94			1.00	0.94
Flpb, ped/bikes	0.99	1.00		1.00	1.00			0.99			0.98	1.00
Frt	1.00	1.00		1.00	1.00			0.90			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.97	1.00
Satd. Flow (prot)	1291	3723		1300	3697			1150			1306	1095
Flt Permitted	0.07	1.00		0.07	1.00			0.94			0.77	1.00
Satd. Flow (perm)	90	3723		94	3697			1095			1031	1095
Volume (vph)	49	1886	47	84	1907	58	33	26	140	40	36	45
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	51	1965	49	88	1986	60	34	27	146	42	38	47
RTOR Reduction (vph)	0	2	0	0	3	0	0	6	0	0	0	4
Lane Group Flow (vph)	51	2012	0	88	2043	0	0	201	0	0	80	43
Conf. Peds. (#/hr)	123		38	38		123	46		63	63		46
Conf. Bikes (#/hr)			7			9						1
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	61.3	61.3		61.3	61.3			20.7			20.7	20.7
Effective Green, g (s)	61.3	61.3		61.3	61.3			20.7			20.7	20.7
Actuated g/C Ratio	0.68	0.68		0.68	0.68			0.23			0.23	0.23
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	61	2536		64	2518			252			237	252
v/s Ratio Prot		0.54			0.55							
v/s Ratio Perm	0.57			c0.93				c0.18			0.08	0.04
v/c Ratio	0.84	0.79		1.38	0.81			0.80			0.34	0.17
Uniform Delay, d1	10.6	10.0		14.4	10.2			32.7			28.9	27.8
Progression Factor	2.55	2.88		0.71	0.67			1.00			1.00	1.00
Incremental Delay, d2	11.7	0.2		209.5	1.5			15.9			0.8	0.3
Delay (s)	38.8	28.9		219.7	8.3			48.6			29.8	28.1
Level of Service	D	C		F	A			D			C	C
Approach Delay (s)		29.1			17.0			48.6			29.2	
Approach LOS		C			B			D			C	

Intersection Summary

HCM Average Control Delay	24.3	HCM Level of Service	C
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↵	↑↑	↵↵	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (prot)	3167	1417	1583	3167	3002	
Flt Permitted	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (perm)	3167	1417	1583	3167	3002	
Volume (vph)	1350	842	95	1560	496	159
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1421	886	100	1642	522	167
RTOR Reduction (vph)	0	76	0	0	35	0
Lane Group Flow (vph)	1421	810	100	1642	654	0
Turn Type		pt+ov	Prot			
Protected Phases	2	2 4	1	6	4	
Permitted Phases						
Actuated Green, G (s)	40.6	73.9	9.0	37.1	29.4	
Effective Green, g (s)	40.5	73.5	8.5	37.0	29.0	
Actuated g/C Ratio	0.45	0.82	0.09	0.41	0.32	
Clearance Time (s)	3.9		3.5	3.9	3.6	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1425	1157	150	1302	967	
v/s Ratio Prot	c0.45	c0.57	c0.06	c0.52	0.22	
v/s Ratio Perm						
v/c Ratio	1.00	0.70	0.67	1.26	0.68	
Uniform Delay, d1	24.7	3.5	39.4	26.5	26.4	
Progression Factor	0.84	0.91	1.00	1.00	1.00	
Incremental Delay, d2	18.2	1.2	10.7	123.8	1.9	
Delay (s)	39.0	4.4	50.0	150.3	28.3	
Level of Service	D	A	D	F	C	
Approach Delay (s)	25.7			144.6	28.3	
Approach LOS	C			F	C	

Intersection Summary

HCM Average Control Delay	69.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	3715		1304	3622		1302	2593		1304	2522	
Flt Permitted	0.13	1.00		0.13	1.00		0.14	1.00		0.15	1.00	
Satd. Flow (perm)	176	3715		176	3622		188	2593		205	2522	
Volume (vph)	114	1802	47	125	1552	104	214	1161	23	104	766	104
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	118	1858	48	129	1600	107	221	1197	24	107	790	107
RTOR Reduction (vph)	0	3	0	0	8	0	0	1	0	0	11	0
Lane Group Flow (vph)	118	1903	0	129	1699	0	221	1220	0	107	886	0
Conf. Peds. (#/hr)	146		118	118		146	97		104	104		97
Conf. Bikes (#/hr)			5			11			3			7
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt		pm+pt		pm+pt	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	36.2	30.2		36.2	30.2		38.1	28.1		33.5	25.8	
Effective Green, g (s)	37.2	31.2		37.2	31.2		39.1	29.1		34.5	26.8	
Actuated g/C Ratio	0.41	0.35		0.41	0.35		0.43	0.32		0.38	0.30	
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	148	1288		148	1256		205	838		173	751	
v/s Ratio Prot	0.05	c0.51		c0.06	0.47		c0.12	c0.47		0.05	0.35	
v/s Ratio Perm	0.28			0.30			0.35			0.18		
v/c Ratio	0.80	1.48		0.87	1.35		1.08	1.46		0.62	1.18	
Uniform Delay, d1	21.5	29.4		22.6	29.4		22.1	30.4		22.6	31.6	
Progression Factor	1.28	0.96		1.43	0.75		1.29	1.33		1.00	1.00	
Incremental Delay, d2	11.8	216.6		26.0	161.7		59.1	207.2		6.4	94.2	
Delay (s)	39.3	244.9		58.3	183.7		87.7	247.8		29.1	125.8	
Level of Service	D	F		E	F		F	F		C	F	
Approach Delay (s)		232.9			174.9			223.3			115.5	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	195.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	124.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frbp, ped/bikes		0.98			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.98			0.99			0.99	
Flt Protected		1.00			0.99			1.00			1.00	
Satd. Flow (prot)		1543			1616			3132			3120	
Flt Permitted		0.94			0.73			0.81			0.79	
Satd. Flow (perm)		1461			1193			2544			2463	
Volume (vph)	31	225	162	49	224	36	42	1219	50	43	1155	64
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	35	256	184	56	255	41	48	1385	57	49	1312	73
RTOR Reduction (vph)	0	26	0	0	5	0	0	3	0	0	4	0
Lane Group Flow (vph)	0	449	0	0	347	0	0	1487	0	0	1430	0
Conf. Peds. (#/hr)	28		18	18		28	29		26	26		29
Conf. Bikes (#/hr)			4			2			1			6
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			55.6			55.6	
Effective Green, g (s)		26.0			26.0			56.0			56.0	
Actuated g/C Ratio		0.29			0.29			0.62			0.62	
Clearance Time (s)		4.0			4.0			4.4			4.4	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		422			345			1583			1533	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.29			c0.58			0.58	
v/c Ratio		1.06			1.01			0.94			0.93	
Uniform Delay, d1		32.0			32.0			15.5			15.3	
Progression Factor		1.00			1.00			1.00			1.05	
Incremental Delay, d2		62.1			49.9			12.2			7.6	
Delay (s)		94.1			81.9			27.6			23.6	
Level of Service		F			F			C			C	
Approach Delay (s)		94.1			81.9			27.6			23.6	
Approach LOS		F			F			C			C	

Intersection Summary			
HCM Average Control Delay	39.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	112.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑		↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00		0.91		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85		0.98		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1304	2608	1167		3686		1304	2608	1167	1304	2604	
Flt Permitted	0.08	1.00	1.00		1.00		0.21	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	112	2608	1167		3686		284	2608	1167	145	2604	
Volume (vph)	69	1335	215	0	1326	161	58	1223	180	194	908	10
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	70	1362	219	0	1353	164	59	1248	184	198	927	10
RTOR Reduction (vph)	0	0	50	0	12	0	0	0	8	0	1	0
Lane Group Flow (vph)	70	1362	169	0	1505	0	59	1248	176	198	936	0
Turn Type	Perm		Perm		Perm		Perm		Perm	Perm	Perm	
Protected Phases	4		8		2		2		6			
Permitted Phases	4		4		2		2		6			
Actuated Green, G (s)	52.0	52.0	52.0		52.0		58.0	58.0	58.0	58.0	58.0	
Effective Green, g (s)	53.0	53.0	53.0		53.0		59.0	59.0	59.0	59.0	59.0	
Actuated g/C Ratio	0.44	0.44	0.44		0.44		0.49	0.49	0.49	0.49	0.49	
Clearance Time (s)	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	49	1152	515		1628		140	1282	574	71	1280	
v/s Ratio Prot		0.52			0.41			0.48			0.36	
v/s Ratio Perm	c0.63		0.15				0.21		0.15	c1.36		
v/c Ratio	1.43	1.18	0.33		0.92		0.42	0.97	0.31	2.79	0.73	
Uniform Delay, d1	33.5	33.5	21.9		31.6		19.6	29.7	18.3	30.5	24.2	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	277.8	91.2	1.7		10.4		9.1	19.5	1.4	842.7	3.7	
Delay (s)	311.3	124.7	23.6		42.0		28.6	49.3	19.6	873.2	27.9	
Level of Service	F	F	C		D		C	D	B	F	C	
Approach Delay (s)		119.2			42.0			44.8			175.4	
Approach LOS		F			D			D			F	

Intersection Summary

HCM Average Control Delay	90.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.13		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	132.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘↗	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4550	1417	3072	4550	1417	1583	3167	1417	1583	3167	1417
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1583	4550	1417	3072	4550	1417	1583	3167	1417	1583	3167	1417
Volume (vph)	236	1663	591	210	1577	250	264	1573	257	70	931	130
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	246	1732	616	219	1643	260	275	1639	268	73	970	135
RTOR Reduction (vph)	0	0	18	0	0	142	0	0	64	0	0	6
Lane Group Flow (vph)	246	1732	598	219	1643	118	275	1639	204	73	970	129
Turn Type	Prot	pm+ov		Prot	Perm		Prot	pm+ov		Prot	pm+ov	
Protected Phases	3	8	1	7	4		1	6	7	5	2	3
Permitted Phases		8			4			6			2	
Actuated Green, G (s)	13.0	37.8	50.8	12.2	37.0	37.0	13.0	40.9	53.1	9.1	37.0	50.0
Effective Green, g (s)	13.0	39.8	52.8	12.2	39.0	39.0	13.0	42.9	55.1	9.1	39.0	52.0
Actuated g/C Ratio	0.11	0.33	0.44	0.10	0.32	0.32	0.11	0.36	0.46	0.08	0.32	0.43
Clearance Time (s)	4.0	6.0	4.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0
Vehicle Extension (s)	3.0	4.7	3.0	3.0	5.0	5.0	3.0	4.5	3.0	3.0	4.6	3.0
Lane Grp Cap (vph)	171	1509	671	312	1479	461	171	1132	698	120	1029	661
v/s Ratio Prot	c0.16	c0.38	0.10	0.07	0.36		c0.17	c0.52	0.03	0.05	0.31	0.02
v/s Ratio Perm			0.33			0.08			0.11			0.07
v/c Ratio	1.44	1.15	0.89	0.70	1.11	0.26	1.61	1.45	0.29	0.61	0.94	0.20
Uniform Delay, d1	53.5	40.1	30.9	52.1	40.5	29.8	53.5	38.5	20.3	53.7	39.4	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.18	0.75	0.33	1.00	1.00	1.00
Incremental Delay, d2	227.3	74.7	14.0	7.0	60.0	0.6	294.8	205.7	0.2	8.4	17.2	0.1
Delay (s)	280.8	114.8	44.9	59.1	100.5	30.4	357.7	234.5	7.0	62.2	56.7	21.2
Level of Service	F	F	D	E	F	C	F	F	A	E	E	C
Approach Delay (s)		114.0			87.7			222.1			52.9	
Approach LOS		F			F			F			D	

Intersection Summary

HCM Average Control Delay	127.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.97		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	3061		1583	3102		1583	4441		1583	3167	1417
Flt Permitted	0.10	1.00		0.07	1.00		0.12	1.00		0.12	1.00	1.00
Satd. Flow (perm)	162	3061		123	3102		196	4441		196	3167	1417
Volume (vph)	140	1384	395	189	1015	161	291	1027	196	228	1324	130
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	143	1412	403	193	1036	164	297	1048	200	233	1351	133
RTOR Reduction (vph)	0	22	0	0	10	0	0	24	0	0	0	30
Lane Group Flow (vph)	143	1793	0	193	1190	0	297	1224	0	233	1351	103
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		pm+ov
Protected Phases	1	6		5	2		3	8		7	4	1
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	61.5	53.0		61.5	53.0		41.5	33.0		41.5	33.0	41.5
Effective Green, g (s)	62.0	54.0		62.0	54.0		42.0	34.0		42.0	34.0	42.0
Actuated g/C Ratio	0.52	0.45		0.52	0.45		0.35	0.28		0.35	0.28	0.35
Clearance Time (s)	3.5	5.0		3.5	5.0		3.5	5.0		3.5	5.0	3.5
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	4.3		3.0	4.6	3.0
Lane Grp Cap (vph)	178	1377		161	1396		161	1258		161	897	543
v/s Ratio Prot	0.05	c0.59		c0.08	0.38		c0.12	0.28		0.10	0.43	0.01
v/s Ratio Perm	0.36			0.54			c0.52			0.41		0.06
v/c Ratio	0.80	1.30		1.20	0.85		1.84	0.97		1.45	1.51	0.19
Uniform Delay, d1	22.0	33.0		58.2	29.4		58.2	42.6		33.6	43.0	27.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.26	1.18	1.70
Incremental Delay, d2	22.4	141.4		134.3	6.7		403.1	19.3		215.4	230.2	0.1
Delay (s)	44.4	174.4		192.5	36.2		461.3	61.8		257.9	280.9	46.2
Level of Service	D	F		F	D		F	E		F	F	D
Approach Delay (s)		164.9			57.8			138.6			259.6	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	160.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.51		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	140.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	↵
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	2591		1304	2608	1304	1167
Flt Permitted	1.00		0.07	1.00	0.95	1.00
Satd. Flow (perm)	2591		99	2608	1304	1167
Volume (vph)	1623	74	107	1654	166	198
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1656	76	109	1688	169	202
RTOR Reduction (vph)	3	0	0	0	0	16
Lane Group Flow (vph)	1729	0	109	1688	169	186
Turn Type			Perm			Perm
Protected Phases	5			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	59.0		59.0	59.0	23.0	23.0
Effective Green, g (s)	59.0		59.0	59.0	23.0	23.0
Actuated g/C Ratio	0.66		0.66	0.66	0.26	0.26
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	4.0		4.0	4.0	3.0	3.0
Lane Grp Cap (vph)	1699		65	1710	333	298
v/s Ratio Prot	0.67			0.65	0.13	
v/s Ratio Perm			c1.10			c0.16
v/c Ratio	1.02		1.68	0.99	0.51	0.62
Uniform Delay, d1	15.5		15.5	15.1	28.7	29.7
Progression Factor	1.44		1.86	1.94	1.00	1.00
Incremental Delay, d2	15.8		310.7	4.2	1.2	4.0
Delay (s)	38.1		339.5	33.6	29.9	33.7
Level of Service	D		F	C	C	C
Approach Delay (s)	38.1			52.2	31.9	
Approach LOS	D			D	C	

Intersection Summary

HCM Average Control Delay	44.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.94			0.96	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.98	
Satd. Flow (prot)	1583	3159		1583	3153			1558			1576	
Flt Permitted	0.22	1.00		0.19	1.00			0.98			0.61	
Satd. Flow (perm)	359	3159		310	3153			1538			987	
Volume (vph)	44	984	15	164	887	26	15	168	161	43	45	34
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	52	1158	18	193	1044	31	18	198	189	51	53	40
RTOR Reduction (vph)	0	1	0	0	2	0	0	36	0	0	16	0
Lane Group Flow (vph)	52	1175	0	193	1073	0	0	369	0	0	128	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		2		2		4		4		4	
Permitted Phases	2		2		4		4		4		4	
Actuated Green, G (s)	57.2	57.2		57.2	57.2			23.6			23.6	
Effective Green, g (s)	57.5	57.5		57.5	57.5			24.5			24.5	
Actuated g/C Ratio	0.64	0.64		0.64	0.64			0.27			0.27	
Clearance Time (s)	4.3	4.3		4.3	4.3			4.9			4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	229	2018		198	2014			419			269	
v/s Ratio Prot		0.37			0.34							
v/s Ratio Perm	0.14			c0.62				c0.24			0.13	
v/c Ratio	0.23	0.58		0.97	0.53			0.88			0.48	
Uniform Delay, d1	6.9	9.3		15.6	8.9			31.3			27.4	
Progression Factor	0.59	0.69		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.5	0.8		57.7	1.0			18.5			1.3	
Delay (s)	5.5	7.2		73.3	9.9			49.9			28.7	
Level of Service	A			E	A			D			C	
Approach Delay (s)	7.1			19.6				49.9			28.7	
Approach LOS	A			B				D			C	

Intersection Summary

HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑		↘	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	1.00	0.81	1.00	1.00	0.69	1.00	0.97		1.00	0.98	
Flpb, ped/bikes	0.96	1.00	1.00	0.99	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1515	3167	1154	1569	3167	974	1583	4348		1583	4434	
Flt Permitted	0.35	1.00	1.00	0.22	1.00	1.00	0.15	1.00		0.14	1.00	
Satd. Flow (perm)	553	3167	1154	366	3167	974	245	4348		235	4434	
Volume (vph)	216	747	68	201	540	137	46	1715	239	88	1540	113
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	223	770	70	207	557	141	47	1768	246	91	1588	116
RTOR Reduction (vph)	0	0	29	0	0	34	0	20	0	0	9	0
Lane Group Flow (vph)	223	770	41	207	557	107	47	1994	0	91	1695	0
Confl. Peds. (#/hr)	162		155	155		162	162		155	155		162
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	7	4	5	3	4	1	5	2		1	6	
Permitted Phases	4		4	4		4	2			6		
Actuated Green, G (s)	38.5	31.5	36.9	38.5	31.5	38.1	31.3	25.9		33.7	27.1	
Effective Green, g (s)	40.0	32.8	38.4	40.0	32.8	39.6	32.8	27.2		35.2	28.4	
Actuated g/C Ratio	0.44	0.36	0.43	0.44	0.36	0.44	0.36	0.30		0.39	0.32	
Clearance Time (s)	4.2	5.3	4.2	4.2	5.3	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	323	1154	544	259	1154	472	173	1314		194	1399	
v/s Ratio Prot	0.06	0.24	0.00	c0.06	0.18	0.02	0.02	c0.46		c0.04	0.38	
v/s Ratio Perm	0.25		0.03	c0.29		0.09	0.08			0.15		
v/c Ratio	0.69	0.67	0.07	0.80	0.48	0.23	0.27	1.52		0.47	1.21	
Uniform Delay, d1	17.8	24.0	15.3	17.9	22.1	15.7	22.8	31.4		22.2	30.8	
Progression Factor	1.38	0.28	0.01	1.74	1.50	2.72	1.17	1.28		1.00	1.00	
Incremental Delay, d2	0.6	0.1	0.0	13.7	0.3	0.2	0.4	234.8		1.8	102.1	
Delay (s)	25.0	6.8	0.1	44.9	33.3	42.9	27.0	275.1		24.0	132.9	
Level of Service	C	A	A	D	C	D	C	F		C	F	
Approach Delay (s)		10.2			37.4			269.4			127.4	
Approach LOS		B			D			F			F	

Intersection Summary

HCM Average Control Delay	142.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕↕↕		↗	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.98			0.92		1.00	1.00		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1598			1505		1583	4528		1583	4543	
Flt Permitted		0.88			0.88		0.09	1.00		0.09	1.00	
Satd. Flow (perm)		1438			1346		142	4528		142	4543	
Volume (vph)	7	7	3	131	17	221	6	1859	61	120	1757	17
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	8	8	3	146	19	246	7	2066	68	133	1952	19
RTOR Reduction (vph)	0	2	0	0	2	0	0	4	0	0	1	0
Lane Group Flow (vph)	0	17	0	0	409	0	7	2130	0	133	1970	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		35.5			35.5		47.5	47.5		47.5	47.5	
Effective Green, g (s)		35.0			35.0		47.0	47.0		47.0	47.0	
Actuated g/C Ratio		0.39			0.39		0.52	0.52		0.52	0.52	
Clearance Time (s)		3.5			3.5		3.5	3.5		3.5	3.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		559			523		74	2365		74	2372	
v/s Ratio Prot								0.47			0.43	
v/s Ratio Perm		0.01			c0.30		0.05			c0.94		
v/c Ratio		0.03			0.78		0.09	0.90		1.80	0.83	
Uniform Delay, d1		17.0			24.1		10.8	19.4		21.5	18.1	
Progression Factor		1.00			1.00		0.51	0.88		0.81	0.80	
Incremental Delay, d2		0.1			11.0		0.2	0.6		373.8	1.1	
Delay (s)		17.1			35.2		5.7	17.8		391.3	15.6	
Level of Service		B			D		A	B		F	B	
Approach Delay (s)		17.1			35.2			17.7			39.4	
Approach LOS		B			D			B			D	

Intersection Summary

HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕↕		↖	↕↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	1.00		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4516		1583	4545		1583	4477		1583	4458	
Flt Permitted	0.13	1.00		0.15	1.00		0.13	1.00		0.13	1.00	
Satd. Flow (perm)	215	4516		247	4545		222	4477		214	4458	
Volume (vph)	485	1962	102	160	1512	10	54	1522	183	125	1674	261
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	527	2133	111	174	1643	11	59	1654	199	136	1820	284
RTOR Reduction (vph)	0	6	0	0	1	0	0	17	0	0	23	0
Lane Group Flow (vph)	527	2238	0	174	1653	0	59	1836	0	136	2081	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	42.0	33.0		32.0	26.0		33.8	29.0		36.2	30.2	
Effective Green, g (s)	43.0	34.0		32.0	27.0		33.8	30.0		36.2	31.2	
Actuated g/C Ratio	0.48	0.38		0.36	0.30		0.38	0.33		0.40	0.35	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	285	1706		162	1364		141	1492		162	1545	
v/s Ratio Prot	c0.25	0.50		0.06	0.36		0.02	0.41		c0.05	c0.47	
v/s Ratio Perm	c0.64			0.32			0.14			0.29		
v/c Ratio	1.85	1.31		1.07	1.21		0.42	1.23		0.84	1.35	
Uniform Delay, d1	41.2	28.0		44.7	31.5		23.2	30.0		23.2	29.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.36	1.31	
Incremental Delay, d2	395.4	144.6		91.8	102.5		2.0	109.9		20.1	158.9	
Delay (s)	436.6	172.6		136.5	134.0		25.2	139.9		51.7	197.3	
Level of Service	F	F		F	F		C	F		D	F	
Approach Delay (s)		222.8			134.2			136.4			188.5	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	176.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	123.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕		↔	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	0.98		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3089		1583	3091		1583	4451		1583	4462	
Flt Permitted	0.11	1.00		0.11	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	189	3089		190	3091		185	4451		185	4462	
Volume (vph)	361	1107	216	126	1133	215	63	1565	266	108	1820	269
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	397	1216	237	138	1245	236	69	1720	292	119	2000	296
RTOR Reduction (vph)	0	18	0	0	3	0	0	26	0	0	22	0
Lane Group Flow (vph)	397	1435	0	138	1478	0	69	1986	0	119	2274	0
Turn Type	pm+pt		pm+pt		Perm		Perm		Perm		Perm	
Protected Phases	5	2		1	6			8				4
Permitted Phases	2			6			8				4	
Actuated Green, G (s)	42.3	34.3		41.9	34.1		35.2	35.2		35.2	35.2	
Effective Green, g (s)	42.2	35.2		41.8	35.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio	0.47	0.39		0.46	0.39		0.40	0.40		0.40	0.40	
Clearance Time (s)	3.0	4.9		3.0	4.9		4.8	4.8		4.8	4.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	197	1208		193	1202		74	1780		74	1785	
v/s Ratio Prot	c0.16	0.46		0.05	0.48			0.45			0.51	
v/s Ratio Perm	c0.79			0.28			0.37			c0.64		
v/c Ratio	2.02	1.19		0.72	1.23		0.93	1.12		1.61	1.27	
Uniform Delay, d1	43.7	27.4		20.9	27.5		25.8	27.0		27.0	27.0	
Progression Factor	1.51	1.04		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	468.2	90.3		11.9	110.8		81.2	60.4		327.4	127.9	
Delay (s)	534.2	118.8		32.8	138.3		107.0	87.4		354.4	154.9	
Level of Service	F	F		C	F		F	F		F	F	
Approach Delay (s)		208.0			129.3			88.0			164.7	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	147.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	132.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘		↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.93			0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99			0.98	
Satd. Flow (prot)	1583	3167	1417	1583	3167	1417		1537			1535	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.99			0.98	
Satd. Flow (perm)	1583	3167	1417	1583	3167	1417		1537			1535	
Volume (vph)	40	902	53	89	518	142	34	77	125	61	39	91
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	980	58	97	563	154	37	84	136	66	42	99
RTOR Reduction (vph)	0	0	42	0	0	107	0	45	0	0	37	0
Lane Group Flow (vph)	43	980	16	97	563	47	0	212	0	0	170	0
Turn Type	Prot		Perm	Prot		Perm	Split				Split	
Protected Phases	1	6		5	2		3	3			4	4
Permitted Phases			6			2						
Actuated Green, G (s)	5.4	24.7	24.7	7.9	27.2	27.2		21.0			21.0	
Effective Green, g (s)	4.4	24.9	24.9	6.9	27.4	27.4		21.6			20.6	
Actuated g/C Ratio	0.05	0.28	0.28	0.08	0.30	0.30		0.24			0.23	
Clearance Time (s)	3.0	4.2	4.2	3.0	4.2	4.2		4.6			3.6	
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0		3.0			3.0	
Lane Grp Cap (vph)	77	876	392	121	964	431		369			351	
v/s Ratio Prot	0.03	c0.31		c0.06	0.18			c0.14			c0.11	
v/s Ratio Perm			0.01			0.03						
v/c Ratio	0.56	1.12	0.04	0.80	0.58	0.11		0.57			0.48	
Uniform Delay, d1	41.9	32.5	23.8	40.9	26.5	22.5		30.2			30.1	
Progression Factor	1.49	0.67	0.23	1.08	1.68	4.43		1.00			1.00	
Incremental Delay, d2	3.0	59.4	0.1	27.3	2.3	0.4		6.4			4.7	
Delay (s)	65.3	81.2	5.5	71.3	46.8	100.1		36.5			34.8	
Level of Service	E	F	A	E	D	F		D			C	
Approach Delay (s)		76.5			59.8			36.5			34.8	
Approach LOS		E			E			D			C	

Intersection Summary

HCM Average Control Delay	62.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷			↷			↷	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.95			0.96	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1583	3161		1583	3148			1567			1567	
Flt Permitted	0.13	1.00		0.09	1.00			0.99			0.81	
Satd. Flow (perm)	209	3161		150	3148			1548			1286	
Volume (vph)	193	1582	12	46	1375	29	8	100	59	34	83	48
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	214	1758	13	51	1528	32	9	111	66	38	92	53
RTOR Reduction (vph)	0	0	0	0	1	0	0	12	0	0	19	0
Lane Group Flow (vph)	214	1771	0	51	1559	0	0	174	0	0	164	0
Confl. Peds. (#/hr)	40		16	16		40	10		8	8		10
Confl. Bikes (#/hr)			15			9			2			5
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	66.3	66.3		66.3	66.3			14.6			14.6	
Effective Green, g (s)	66.8	66.8		66.8	66.8			15.2			15.2	
Actuated g/C Ratio	0.74	0.74		0.74	0.74			0.17			0.17	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.6			4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	155	2346		111	2337			261			217	
v/s Ratio Prot		0.56			0.50							
v/s Ratio Perm	c1.02			0.34				0.11			c0.13	
v/c Ratio	1.38	0.75		0.46	0.67			0.67			0.76	
Uniform Delay, d1	11.6	6.8		4.5	5.9			35.0			35.6	
Progression Factor	1.00	1.00		0.72	0.52			1.00			1.00	
Incremental Delay, d2	206.3	2.3		1.2	0.1			6.3			13.9	
Delay (s)	217.9	9.1		4.5	3.2			41.4			49.5	
Level of Service	F	A		A	A			D			D	
Approach Delay (s)		31.6			3.2			41.4			49.5	
Approach LOS		C			A			D			D	

Intersection Summary

HCM Average Control Delay	21.4	HCM Level of Service	C
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2908		1490	2951		1490	2898		1490	2860	
Flt Permitted	0.22	1.00		0.17	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	343	2908		273	2951		157	2898		157	2860	
Volume (vph)	501	641	123	205	532	38	136	1132	256	32	1082	398
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	533	682	131	218	566	40	145	1204	272	34	1151	423
RTOR Reduction (vph)	0	18	0	0	6	0	0	22	0	0	42	0
Lane Group Flow (vph)	533	795	0	218	600	0	145	1454	0	34	1532	0
Turn Type	pm+pt			pm+pt			Perm			Perm		
Protected Phases	7	4		3	8			2			2	
Permitted Phases	4			8			2			2		
Actuated Green, G (s)	39.3	23.3		36.7	22.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	39.3	24.3		36.7	23.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio	0.44	0.27		0.41	0.26		0.44	0.44		0.44	0.44	
Clearance Time (s)	3.0	5.0		3.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	5.1		3.0	4.1		5.7	5.7		5.7	5.7	
Lane Grp Cap (vph)	341	785		297	754		70	1288		70	1271	
v/s Ratio Prot	c0.26	0.27		0.11	0.20			0.50			0.54	
v/s Ratio Perm	c0.42			0.19			c0.92			0.22		
v/c Ratio	1.56	1.01		0.73	0.80		2.07	1.13		0.49	1.21	
Uniform Delay, d1	20.1	32.9		20.2	31.3		25.0	25.0		17.7	25.0	
Progression Factor	1.00	1.00		0.90	1.15		1.16	1.18		1.00	1.00	
Incremental Delay, d2	267.3	35.5		8.2	7.7		486.6	59.2		22.2	100.2	
Delay (s)	287.4	68.3		26.4	43.7		515.6	88.6		39.9	125.2	
Level of Service	F	E		C	D		F	F		D	F	
Approach Delay (s)		155.1			39.2			126.8			123.4	
Approach LOS		F			D			F			F	

Intersection Summary

HCM Average Control Delay	119.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	124.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.91	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1490	4226		1490	4250		1490	2980	1333	1490	4227	
Flt Permitted	0.14	1.00		0.12	1.00		0.17	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	222	4226		195	4250		269	2980	1333	1490	4227	
Volume (vph)	42	1727	166	307	1224	64	69	1456	357	151	1131	106
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	45	1857	178	330	1316	69	74	1566	384	162	1216	114
RTOR Reduction (vph)	0	12	0	0	6	0	0	0	37	0	13	0
Lane Group Flow (vph)	45	2023	0	330	1379	0	74	1566	347	162	1317	0
Turn Type	pm+pt			pm+pt			Perm		pm+ov		Prot	
Protected Phases	3	8		7	4			2	7		1	6
Permitted Phases	8			4			2		2			
Actuated Green, G (s)	33.1	27.1		43.1	32.1		23.3	23.3	34.3	10.0	21.9	
Effective Green, g (s)	35.5	28.3		43.1	32.1		23.3	23.3	34.3	11.4	23.3	
Actuated g/C Ratio	0.39	0.31		0.48	0.36		0.26	0.26	0.38	0.13	0.26	
Clearance Time (s)	5.2	5.2		4.0	4.0		4.0	4.0	4.0	5.4	5.4	
Vehicle Extension (s)	3.0	3.0		3.5	3.0		3.0	3.0	3.5	3.0	3.0	
Lane Grp Cap (vph)	189	1329		252	1516		70	771	567	189	1094	
v/s Ratio Prot	0.02	c0.48		c0.16	0.32			c0.53	0.07	c0.11	0.31	
v/s Ratio Perm	0.07			0.47			0.27		0.19			
v/c Ratio	0.24	1.52		1.31	0.91		1.06	2.03	0.61	0.86	1.20	
Uniform Delay, d1	18.4	30.9		41.7	27.6		33.4	33.4	22.5	38.5	33.4	
Progression Factor	1.48	1.42		1.00	1.00		1.10	1.09	0.66	1.36	0.80	
Incremental Delay, d2	0.1	235.2		164.8	9.7		48.4	464.4	0.2	3.7	92.8	
Delay (s)	27.2	279.0		206.6	37.2		85.1	500.7	15.0	56.1	119.5	
Level of Service	C	F		F	D		F	F	B	E	F	
Approach Delay (s)		273.5			69.8			393.4			112.6	
Approach LOS		F			E			F			F	
Intersection Summary												
HCM Average Control Delay			226.1			HCM Level of Service				F		
HCM Volume to Capacity ratio			1.64									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			20.0			
Intersection Capacity Utilization			135.3%			ICU Level of Service				H		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	0.99		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	2970		1509	1575		1509	4328		1509	4255	
Flt Permitted	0.21	1.00		0.21	1.00		0.22	1.00		0.22	1.00	
Satd. Flow (perm)	334	2970		334	1575		353	4328		353	4255	
Volume (vph)	154	951	111	125	900	54	144	1735	22	74	1459	208
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	166	1023	119	134	968	58	155	1866	24	80	1569	224
RTOR Reduction (vph)	0	3	0	0	1	0	0	3	0	0	30	0
Lane Group Flow (vph)	166	1139	0	134	1025	0	155	1887	0	80	1763	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		4		4		2		2		2	
Permitted Phases	4		4		4		2		2		2	
Actuated Green, G (s)	19.0	19.0		19.0	19.0		18.0	18.0		18.0	18.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		18.0	18.0		18.0	18.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.40	0.40		0.40	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	141	1254		141	665		141	1731		141	1702	
v/s Ratio Prot		0.38			c0.65			0.44			0.41	
v/s Ratio Perm	0.50			0.40			c0.44			0.23		
v/c Ratio	1.18	0.91		0.95	1.54		1.10	1.09		0.57	1.04	
Uniform Delay, d1	13.0	12.2		12.5	13.0		13.5	13.5		10.5	13.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.88	0.89	
Incremental Delay, d2	131.3	9.7		60.6	251.0		104.9	50.6		1.5	18.5	
Delay (s)	144.3	21.9		73.1	264.0		118.4	64.1		10.7	30.5	
Level of Service	F	C		E	F		F	E		B	C	
Approach Delay (s)		37.4			241.9			68.2			29.7	
Approach LOS		D			F			E			C	

Intersection Summary

HCM Average Control Delay	82.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	130.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↘	↕		↘	↕		↘	↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.98		1.00	0.98		1.00	0.98		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	2935		1509	2937		1509	4163		1509	4143	
Flt Permitted	0.09	1.00		0.09	1.00		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	138	2935		138	2937		219	4163		225	4143	
Volume (vph)	192	1369	104	222	1144	84	96	1746	269	97	1460	139
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	202	1441	109	234	1204	88	101	1838	283	102	1537	146
RTOR Reduction (vph)	0	5	0	0	5	0	0	21	0	0	11	0
Lane Group Flow (vph)	202	1545	0	234	1287	0	101	2100	0	102	1672	0
Conf. Peds. (#/hr)	161		159	159		161	383		91	91		383
Conf. Bikes (#/hr)			19			25			10			23
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt		pm+pt		pm+pt	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	52.0	46.0		52.0	46.0		34.8	29.0		33.2	28.2	
Effective Green, g (s)	51.0	46.0		51.0	46.0		33.8	29.0		32.2	28.2	
Actuated g/C Ratio	0.51	0.46		0.51	0.46		0.34	0.29		0.32	0.28	
Clearance Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	1.0	0.2		1.0	0.2		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	139	1350		139	1351		136	1207		124	1168	
v/s Ratio Prot	0.07	0.53		c0.08	0.44		c0.04	c0.50		0.03	0.40	
v/s Ratio Perm	0.67			c0.77			0.22			0.23		
v/c Ratio	1.45	1.14		1.68	0.95		0.74	1.74		0.82	1.43	
Uniform Delay, d1	20.0	27.0		22.8	25.9		27.7	35.5		32.1	35.9	
Progression Factor	1.95	0.52		1.00	1.00		1.05	0.83		1.00	1.00	
Incremental Delay, d2	207.6	65.8		336.7	15.5		1.8	333.4		32.4	199.0	
Delay (s)	246.6	79.8		359.5	41.4		30.7	362.8		64.5	234.9	
Level of Service	F	E		F	D		C	F		E	F	
Approach Delay (s)		99.0			90.2			347.7			225.1	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	203.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	130.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗		↖	↗	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.98			0.99		1.00	1.00		1.00	0.97	
Flpb, ped/bikes	0.97	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90			0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1464	1402			1518		1509	2984		1509	2893	
Flt Permitted	0.56	1.00			0.54		0.06	1.00		0.07	1.00	
Satd. Flow (perm)	860	1402			827		102	2984		108	2893	
Volume (vph)	101	100	186	61	92	22	226	1965	105	22	1545	176
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	106	105	196	64	97	23	238	2068	111	23	1626	185
RTOR Reduction (vph)	0	74	0	0	5	0	0	3	0	0	7	0
Lane Group Flow (vph)	106	227	0	0	179	0	238	2176	0	23	1804	0
Conf. Peds. (#/hr)	33		13	13		33	97		20	20		97
Conf. Bikes (#/hr)			3			4			6			22
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	24.2	24.2			24.2		67.8	62.4		61.2	58.8	
Effective Green, g (s)	24.2	24.2			24.2		67.4	62.4		60.2	58.8	
Actuated g/C Ratio	0.24	0.24			0.24		0.67	0.62		0.60	0.59	
Clearance Time (s)	4.0	4.0			4.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	5.0	5.0			5.0		1.0	0.2		1.0	0.2	
Lane Grp Cap (vph)	208	339			200		139	1862		85	1701	
v/s Ratio Prot		0.16					c0.09	0.73		0.00	0.62	
v/s Ratio Perm	0.12				c0.22		c1.07			0.16		
v/c Ratio	0.51	0.67			0.89		1.71	1.17		0.27	1.06	
Uniform Delay, d1	32.8	34.3			36.7		27.7	18.8		25.1	20.6	
Progression Factor	1.00	1.00			1.00		1.00	1.00		2.08	1.76	
Incremental Delay, d2	4.1	6.7			37.6		349.1	82.1		0.1	28.7	
Delay (s)	36.8	41.0			74.2		376.8	100.9		52.4	65.0	
Level of Service	D	D			E		F	F		D	E	
Approach Delay (s)		39.9			74.2			128.0			64.8	
Approach LOS		D			E			F			E	

Intersection Summary

HCM Average Control Delay	94.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	123.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑↑↑		↕	↑↑↑	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.98			0.97		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1525			1514		1490	4243		1490	4273	
Flt Permitted		0.83			0.76		0.08	1.00		0.08	1.00	
Satd. Flow (perm)		1271			1154		123	4243		123	4273	
Volume (vph)	76	369	80	65	250	79	60	2256	146	83	1897	27
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	80	388	84	68	263	83	63	2375	154	87	1997	28
RTOR Reduction (vph)	0	5	0	0	2	0	0	8	0	0	2	0
Lane Group Flow (vph)	0	547	0	0	412	0	63	2521	0	87	2023	0
Turn Type	Perm		Perm		Perm			Perm				
Protected Phases	8		4		4			6		2		
Permitted Phases	8		4		6			2				
Actuated Green, G (s)	30.0		30.0		50.6			50.6		50.6		
Effective Green, g (s)	31.0		31.0		51.0			51.0		51.0		
Actuated g/C Ratio	0.34		0.34		0.57			0.57		0.57		
Clearance Time (s)	5.0		5.0		4.4			4.4		4.4		
Vehicle Extension (s)	3.0		3.0		3.0			3.0		3.0		
Lane Grp Cap (vph)	438		397		70			2404		70		
v/s Ratio Prot					0.59			0.47				
v/s Ratio Perm	c0.43		0.36		0.51			c0.71				
v/c Ratio	1.25		1.04		0.90			1.05		1.24		
Uniform Delay, d1	29.5		29.5		17.2			19.5		19.5		
Progression Factor	1.00		1.00		0.43			0.48		1.00		
Incremental Delay, d2	129.6		55.3		15.5			23.3		186.4		
Delay (s)	159.1		84.8		22.9			32.7		205.9		
Level of Service	F		F		C			C		F		
Approach Delay (s)	159.1		84.8		32.5			27.3				
Approach LOS	F		F		C			C				

Intersection Summary

HCM Average Control Delay	46.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	117.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕		↔	↕	
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2945		1490	2958		1490	4221		1490	4227	
Flt Permitted	0.22	1.00		0.12	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	340	2945		185	2958		161	4221		161	4227	
Volume (vph)	128	1155	100	188	977	52	10	2218	236	79	1879	178
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	136	1229	106	200	1039	55	11	2360	251	84	1999	189
RTOR Reduction (vph)	0	7	0	0	0	0	0	14	0	0	12	0
Lane Group Flow (vph)	136	1328	0	200	1094	0	11	2597	0	84	2176	0
Turn Type	Perm		pm+pt			Perm			Perm			
Protected Phases	8		7			4			6			
Permitted Phases	8		4			6			2			
Actuated Green, G (s)	28.6	28.6	41.6		41.6	37.6		37.6	37.6		37.6	
Effective Green, g (s)	30.0	30.0	43.0		43.0	39.0		39.0	39.0		39.0	
Actuated g/C Ratio	0.33	0.33	0.48		0.48	0.43		0.43	0.43		0.43	
Clearance Time (s)	5.4	5.4	3.5		5.4	5.4		5.4	5.4		5.4	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	113	982	219		1413	70		1829	70		1832	
v/s Ratio Prot	c0.45		c0.09		0.37	c0.62			0.51			
v/s Ratio Perm	0.40		0.35			0.07			0.52			
v/c Ratio	1.20	1.35	0.91		0.77	0.16		1.42	1.20		1.19	
Uniform Delay, d1	30.0	30.0	42.1		19.5	15.5		25.5	25.5		25.5	
Progression Factor	0.62	0.64	1.00		1.00	0.16		0.30	1.37		1.38	
Incremental Delay, d2	99.4	159.0	37.7		4.2	0.4		189.2	143.7		87.7	
Delay (s)	118.0	178.2	79.8		23.7	2.9		196.8	178.6		122.9	
Level of Service	F		E		C	A			F		F	
Approach Delay (s)	172.6		32.3			196.0			125.0			
Approach LOS	F		C			F			F			

Intersection Summary

HCM Average Control Delay	142.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	132.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑		↙	↑↑			↑	↗		↑↑	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frbp, ped/bikes	1.00	0.98		1.00	0.99			1.00	0.93		0.97	
Flpb, ped/bikes	0.98	1.00		1.00	1.00			0.97	1.00		0.99	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.99	
Satd. Flow (prot)	1485	2915		1509	2975			1479	1255		1440	
Flt Permitted	0.17	1.00		0.06	1.00			0.63	1.00		0.91	
Satd. Flow (perm)	260	2915		100	2975			965	1255		1322	
Volume (vph)	35	1543	137	128	1193	56	139	34	132	26	48	45
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	1714	152	142	1326	62	154	38	147	29	53	50
RTOR Reduction (vph)	0	6	0	0	3	0	0	0	91	0	25	0
Lane Group Flow (vph)	39	1860	0	142	1385	0	0	192	56	0	107	0
Conf. Peds. (#/hr)	50		85	85		50	37		38	38		37
Conf. Bikes (#/hr)			12			7			3			3
Turn Type	Perm			pm+pt			Perm		Perm	Perm		
Protected Phases		2		1	6			8				4
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	59.6	59.6		68.6	68.6			23.4	23.4		23.4	
Effective Green, g (s)	59.6	59.6		68.6	68.6			23.4	23.4		23.4	
Actuated g/C Ratio	0.60	0.60		0.69	0.69			0.23	0.23		0.23	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	0.2	0.2		1.0	0.2			4.0	4.0		3.0	
Lane Grp Cap (vph)	155	1737		139	2041			226	294		309	
v/s Ratio Prot		c0.64		c0.05	0.47							
v/s Ratio Perm	0.15			0.65			c0.20	0.04			0.08	
v/c Ratio	0.25	1.07		1.02	0.68		0.85	0.19			0.35	
Uniform Delay, d1	9.6	20.2		28.6	9.2		36.6	30.7			31.9	
Progression Factor	0.73	1.02		1.81	1.35		1.00	1.00			1.00	
Incremental Delay, d2	3.4	42.4		50.9	0.7		25.4	0.4			0.7	
Delay (s)	10.4	62.9		102.7	13.1		62.0	31.1			32.6	
Level of Service	B	E		F	B		E	C			C	
Approach Delay (s)		61.8		21.4			48.6				32.6	
Approach LOS		E		C			D				C	

Intersection Summary

HCM Average Control Delay	43.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↶↶	↶↶		↶↶	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	0.99		0.89	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1509	3018	2994		1405	
Flt Permitted	0.15	1.00	1.00		0.99	
Satd. Flow (perm)	243	3018	2994		1405	
Volume (vph)	91	1439	1352	76	26	94
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	94	1484	1394	78	27	97
RTOR Reduction (vph)	0	0	3	0	70	0
Lane Group Flow (vph)	94	1484	1469	0	54	0
Turn Type	Perm					
Protected Phases		2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	80.3	80.3	80.3		11.7	
Effective Green, g (s)	79.8	79.8	79.8		12.2	
Actuated g/C Ratio	0.80	0.80	0.80		0.12	
Clearance Time (s)	3.5	3.5	3.5		4.5	
Vehicle Extension (s)	0.2	0.2	0.2		3.0	
Lane Grp Cap (vph)	194	2408	2389		171	
v/s Ratio Prot		c0.49	0.49		c0.04	
v/s Ratio Perm	0.39					
v/c Ratio	0.48	0.62	0.61		0.31	
Uniform Delay, d1	3.3	4.0	4.0		40.1	
Progression Factor	0.47	0.28	1.61		1.00	
Incremental Delay, d2	6.5	0.9	0.9		1.1	
Delay (s)	8.0	2.0	7.3		41.1	
Level of Service	A	A	A		D	
Approach Delay (s)		2.4	7.3		41.1	
Approach LOS		A	A		D	
Intersection Summary						
HCM Average Control Delay			6.2		HCM Level of Service	A
HCM Volume to Capacity ratio			0.58			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			81.8%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖		↖	↖↖↖		↖	↖↖	↖	↖	↖↖	↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	4502		1583	4494		1583	3167	1417	1583	3167	1417
Flt Permitted	0.12	1.00		0.11	1.00		0.15	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	198	4502		175	4494		252	3167	1417	222	3167	1417
Volume (vph)	300	1815	138	261	1125	100	153	1310	282	126	801	301
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	323	1952	148	281	1210	108	165	1409	303	135	861	324
RTOR Reduction (vph)	0	9	0	0	12	0	0	0	1	0	0	178
Lane Group Flow (vph)	323	2091	0	281	1306	0	165	1409	302	135	861	146
Turn Type	pm+pt			pm+pt			Perm	pm+ov	Perm		Perm	
Protected Phases	1	6		5	2		8	8	5		4	
Permitted Phases	6			2			8	8	4			4
Actuated Green, G (s)	48.0	37.0		48.0	37.0		28.1	28.1	39.1	28.1	28.1	28.1
Effective Green, g (s)	48.0	38.0		48.0	38.0		30.0	30.0	40.0	30.0	30.0	30.0
Actuated g/C Ratio	0.53	0.42		0.53	0.42		0.33	0.33	0.44	0.33	0.33	0.33
Clearance Time (s)	3.0	5.0		3.0	5.0		5.9	5.9	3.0	5.9	5.9	5.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	259	1901		250	1897		84	1056	693	74	1056	472
v/s Ratio Prot	c0.14	0.46		0.12	0.29			0.44	0.05		0.27	
v/s Ratio Perm	c0.53			0.47			c0.65		0.16	0.61		0.10
v/c Ratio	1.25	1.10		1.12	0.69		1.96	1.33	0.44	1.82	0.82	0.31
Uniform Delay, d1	21.1	26.0		25.6	21.2		30.0	30.0	17.2	30.0	27.5	22.3
Progression Factor	1.00	1.00		1.59	1.41		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	139.2	53.7		77.2	0.9		473.9	156.9	0.4	418.6	6.9	1.7
Delay (s)	160.3	79.7		118.0	30.8		503.9	186.9	17.7	448.6	34.4	24.0
Level of Service	F	E		F	C		F	F	B	F	C	C
Approach Delay (s)		90.4			46.1			187.5			74.2	
Approach LOS		F			D			F			E	

Intersection Summary

HCM Average Control Delay	102.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	120.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕		↔	↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	2999		1509	2979		1509	2973		1509	2961	
Flt Permitted	0.20	1.00		0.12	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	310	2999		196	2979		176	2973		176	2961	
Volume (vph)	308	1190	52	179	919	85	66	1344	148	43	984	141
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	324	1253	55	188	967	89	69	1415	156	45	1036	148
RTOR Reduction (vph)	0	3	0	0	2	0	0	8	0	0	12	0
Lane Group Flow (vph)	324	1305	0	188	1054	0	69	1563	0	45	1172	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	6			2			4			8		
Permitted Phases	6			2			4			8		
Actuated Green, G (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	56.0	56.0		56.0	56.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.36	0.36		0.36	0.36	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	4.9	4.9		4.9	4.9		4.9	4.9		4.9	4.9	
Lane Grp Cap (vph)	174	1679		110	1668		63	1070		63	1066	
v/s Ratio Prot		0.44			0.35			c0.53			0.40	
v/s Ratio Perm	c1.04			0.96			0.39			0.26		
v/c Ratio	1.86	0.78		1.71	0.63		1.10	1.46		0.71	1.10	
Uniform Delay, d1	22.0	17.1		22.0	15.0		32.0	32.0		27.6	32.0	
Progression Factor	1.00	1.00		1.00	1.00		0.99	0.95		1.00	1.00	
Incremental Delay, d2	409.1	3.6		354.6	1.8		113.7	210.2		51.1	59.1	
Delay (s)	431.1	20.7		376.6	16.8		145.3	240.6		78.7	91.1	
Level of Service	F	C		F	B		F	F		E	F	
Approach Delay (s)		102.2			71.2			236.5			90.6	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	131.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	123.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
133: Norton Ave & Fairfax Ave



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frbp, ped/bikes	0.95		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		0.98	1.00	1.00	
Frt	0.91		1.00	1.00	1.00	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1348		1475	3018	2987	
Flt Permitted	0.98		0.18	1.00	1.00	
Satd. Flow (perm)	1348		278	3018	2987	
Volume (vph)	77	134	212	1576	1140	28
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	82	143	226	1677	1213	30
RTOR Reduction (vph)	61	0	0	0	2	0
Lane Group Flow (vph)	164	0	226	1677	1241	0
Conf. Peds. (#/hr)		58	70			70
Conf. Bikes (#/hr)						3
Turn Type			Perm			
Protected Phases	4			2	2	
Permitted Phases			2			
Actuated Green, G (s)	23.4		69.0	69.0	69.0	
Effective Green, g (s)	23.4		68.6	68.6	68.6	
Actuated g/C Ratio	0.23		0.69	0.69	0.69	
Clearance Time (s)	4.0		3.6	3.6	3.6	
Vehicle Extension (s)	3.0		0.2	0.2	0.2	
Lane Grp Cap (vph)	315		191	2070	2049	
v/s Ratio Prot	c0.12			0.56	0.42	
v/s Ratio Perm			c0.81			
v/c Ratio	0.52		1.18	0.81	0.61	
Uniform Delay, d1	33.4		15.7	11.1	8.4	
Progression Factor	1.00		0.96	0.58	1.66	
Incremental Delay, d2	6.1		87.6	0.3	0.1	
Delay (s)	39.5		102.7	6.8	14.1	
Level of Service	D		F	A	B	
Approach Delay (s)	39.5			18.2	14.1	
Approach LOS	D			B	B	
Intersection Summary						
HCM Average Control Delay			18.1		HCM Level of Service	B
HCM Volume to Capacity ratio			1.02			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			81.1%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↘	↕		↘	↕	↘		↕	↘
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00		0.91	0.91
Frbp, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	0.77		1.00	0.69
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1509	2906		1509	2939		1509	3018	1041		2879	844
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.52	1.00
Satd. Flow (perm)	1509	2906		1509	2939		1509	3018	1041		1498	844
Volume (vph)	336	1154	153	208	1068	71	153	1306	239	92	1085	86
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	354	1215	161	219	1124	75	161	1375	252	97	1142	91
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	86	0	0	53
Lane Group Flow (vph)	354	1376	0	219	1194	0	161	1375	166	0	1239	38
Conf. Peds. (#/hr)	216		151	151		216	215		146	146		215
Conf. Bikes (#/hr)			11			9			6			6
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases								8				4
Actuated Green, G (s)	13.0	51.0		4.5	42.5		6.5	33.5	33.5		24.0	24.0
Effective Green, g (s)	12.0	51.0		3.5	42.5		5.5	33.5	33.5		24.0	24.0
Actuated g/C Ratio	0.12	0.51		0.04	0.42		0.06	0.34	0.34		0.24	0.24
Clearance Time (s)	3.0	4.0		3.0	4.0		3.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	1.0	0.2		1.0	0.2		1.0	5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	181	1482		53	1249		83	1011	349		360	203
v/s Ratio Prot	c0.23	c0.47		c0.15	0.41		c0.11	0.46				
v/s Ratio Perm									0.16		c0.83	0.04
v/c Ratio	1.96	0.93		4.13	0.96		1.94	1.36	0.47		3.44	0.19
Uniform Delay, d1	44.0	22.8		48.2	27.9		47.2	33.2	26.3		38.0	30.2
Progression Factor	1.14	0.55		1.05	0.79		1.00	1.00	1.00		0.91	0.90
Incremental Delay, d2	437.9	5.3		1444.8	14.6		463.7	168.5	4.6		1104.3	1.6
Delay (s)	488.2	17.8		1495.2	36.6		511.0	201.7	30.9		1138.7	28.8
Level of Service	F	B		F	D		F	F	C		F	C
Approach Delay (s)		114.1			261.9			205.5			1062.8	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	375.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	154.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↑↑↑		↖	↑↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.99			0.94		1.00	1.00		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1641			1562		1583	4529		1583	4506	
Flt Permitted		0.89			0.86		0.11	1.00		0.08	1.00	
Satd. Flow (perm)		1471			1356		187	4529		141	4506	
Volume (vph)	48	360	34	58	207	193	13	1538	48	48	1316	91
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	51	383	36	62	220	205	14	1636	51	51	1400	97
RTOR Reduction (vph)	0	4	0	0	4	0	0	3	0	0	7	0
Lane Group Flow (vph)	0	466	0	0	483	0	14	1684	0	51	1490	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		33.2			33.2		47.0	47.0		47.0	47.0	
Effective Green, g (s)		34.6			34.6		47.4	47.4		47.4	47.4	
Actuated g/C Ratio		0.38			0.38		0.53	0.53		0.53	0.53	
Clearance Time (s)		5.4			5.4		4.4	4.4		4.4	4.4	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		566			521		98	2385		74	2373	
v/s Ratio Prot								c0.37				0.33
v/s Ratio Perm		0.32			c0.36		0.07			0.36		
v/c Ratio		0.82			0.93		0.14	0.71		0.69	0.63	
Uniform Delay, d1		25.0			26.5		10.9	16.1		15.8	15.1	
Progression Factor		1.00			1.00		1.61	1.60		1.00	1.00	
Incremental Delay, d2		9.5			22.7		1.1	0.7		41.6	1.3	
Delay (s)		34.4			49.2		18.7	26.3		57.4	16.3	
Level of Service		C			D		B	C		E	B	
Approach Delay (s)		34.4			49.2			26.2			17.7	
Approach LOS		C			D			C			B	

Intersection Summary

HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3117		1583	3073		1583	4473		1583	4438	
Flt Permitted	0.31	1.00		0.10	1.00		0.12	1.00		0.12	1.00	
Satd. Flow (perm)	519	3117		163	3073		202	4473		202	4438	
Volume (vph)	232	1234	143	207	721	176	75	1361	172	143	1071	211
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	237	1259	146	211	736	180	77	1389	176	146	1093	215
RTOR Reduction (vph)	0	10	0	0	3	0	0	18	0	0	32	0
Lane Group Flow (vph)	237	1395	0	211	913	0	77	1547	0	146	1276	0
Turn Type	Perm		pm+pt			Perm			Perm			
Protected Phases	8		7			4			6			
Permitted Phases	8		4			6			2			
Actuated Green, G (s)	35.7	35.7		47.7	47.7		32.1	32.1		32.1	32.1	
Effective Green, g (s)	37.0	37.0		49.0	49.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio	0.41	0.41		0.54	0.54		0.37	0.37		0.37	0.37	
Clearance Time (s)	5.3	5.3		3.5	5.3		4.9	4.9		4.9	4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	213	1281		215	1673		74	1640		74	1627	
v/s Ratio Prot		0.45		c0.09	0.30			0.35			0.29	
v/s Ratio Perm	c0.46			0.45			0.38			c0.72		
v/c Ratio	1.11	1.09		0.98	0.55		1.04	0.94		1.97	0.78	
Uniform Delay, d1	26.5	26.5		24.4	13.3		28.5	27.6		28.5	25.3	
Progression Factor	1.00	1.00		0.84	0.74		0.58	0.56		1.06	1.13	
Incremental Delay, d2	95.2	53.0		39.4	0.7		42.4	1.6		472.6	3.0	
Delay (s)	121.7	79.5		59.9	10.5		58.9	17.1		502.9	31.6	
Level of Service	F	E		E	B		E	B		F	C	
Approach Delay (s)		85.6			19.7			19.0			79.0	
Approach LOS		F			B			B			E	

Intersection Summary

HCM Average Control Delay	52.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.46		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↖		↕		↖	↕	↖
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		0.95		1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00		0.95	1.00	1.00
Satd. Flow (prot)	1509	3015		1509	3018	1350		2985		1509	3018	1350
Flt Permitted	0.09	1.00		0.10	1.00	1.00		0.95		0.13	1.00	1.00
Satd. Flow (perm)	138	3015		154	3018	1350		2848		205	3018	1350
Volume (vph)	314	1441	10	33	1128	78	3	1189	91	79	675	249
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	327	1501	10	34	1175	81	3	1239	95	82	703	259
RTOR Reduction (vph)	0	0	0	0	0	21	0	6	0	0	0	179
Lane Group Flow (vph)	327	1511	0	34	1175	60	0	1331	0	82	703	80
Turn Type	pm+pt			pm+pt			Perm	Perm		Perm		Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	61.0	55.2		44.8	42.0	42.0		31.0		31.0	31.0	31.0
Effective Green, g (s)	61.0	55.2		43.8	42.0	42.0		31.0		31.0	31.0	31.0
Actuated g/C Ratio	0.61	0.55		0.44	0.42	0.42		0.31		0.31	0.31	0.31
Clearance Time (s)	3.0	4.0		3.0	4.0	4.0		4.0		4.0	4.0	4.0
Vehicle Extension (s)	1.0	3.0		1.0	3.0	3.0		3.5		3.5	3.5	3.5
Lane Grp Cap (vph)	290	1664		92	1268	567		883		64	936	419
v/s Ratio Prot	c0.17	0.50		0.01	0.39						0.23	
v/s Ratio Perm	c0.52			0.16		0.04		c0.47		0.40		0.06
v/c Ratio	1.13	0.91		0.37	0.93	0.11		1.51		1.28	0.75	0.19
Uniform Delay, d1	30.6	20.1		18.1	27.5	17.6		34.5		34.5	31.0	25.3
Progression Factor	1.00	1.00		0.91	1.01	0.95		1.00		1.00	1.00	1.00
Incremental Delay, d2	91.7	8.8		0.1	1.5	0.0		234.5		205.5	5.5	1.0
Delay (s)	122.3	28.9		16.5	29.3	16.7		269.0		240.0	36.6	26.3
Level of Service	F	C		B	C	B		F		F	D	C
Approach Delay (s)		45.5			28.1			269.0			50.0	
Approach LOS		D			C			F			D	

Intersection Summary

HCM Average Control Delay	96.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	134.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷			↷			↷	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1583	3166		1583	3153			1614			1616	
Flt Permitted	0.15	1.00		0.14	1.00			0.99			0.87	
Satd. Flow (perm)	251	3166		225	3153			1599			1415	
Volume (vph)	149	1798	4	40	1076	32	13	403	120	41	194	49
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	155	1873	4	42	1121	33	14	420	125	43	202	51
RTOR Reduction (vph)	0	0	0	0	4	0	0	3	0	0	13	0
Lane Group Flow (vph)	155	1877	0	42	1150	0	0	556	0	0	283	0
Turn Type	Perm		Perm		Perm			Perm				
Protected Phases	6		2		2			8				
Permitted Phases	6		2		8			4				
Actuated Green, G (s)	29.3	29.3		29.3	29.3			21.5			21.5	
Effective Green, g (s)	29.6	29.6		29.6	29.6			22.4			22.4	
Actuated g/C Ratio	0.49	0.49		0.49	0.49			0.37			0.37	
Clearance Time (s)	4.3	4.3		4.3	4.3			4.9			4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	124	1562		111	1555			597			528	
v/s Ratio Prot		0.59			0.36							
v/s Ratio Perm	c0.62			0.19				c0.35			0.20	
v/c Ratio	1.25	1.20		0.38	0.74			0.93			0.54	
Uniform Delay, d1	15.2	15.2		9.5	12.1			18.1			14.7	
Progression Factor	1.98	2.08		1.00	1.00			1.00			1.00	
Incremental Delay, d2	118.7	91.4		9.5	3.2			21.4			1.1	
Delay (s)	148.7	123.0		19.0	15.3			39.5			15.8	
Level of Service	F	F		B	B			D			B	
Approach Delay (s)		125.0			15.5			39.5			15.8	
Approach LOS		F			B			D			B	

Intersection Summary

HCM Average Control Delay	73.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	113.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑		↑↓		↑	↑↓	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)		4.0			4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95	1.00		1.00		0.95	0.95	
Frt		1.00			1.00	0.85		0.96		1.00	0.99	
Flt Protected		1.00			1.00	1.00		0.99		0.95	0.97	
Satd. Flow (prot)		3014			3018	1350		1499		1433	1440	
Flt Permitted		1.00			1.00	1.00		0.99		0.95	0.97	
Satd. Flow (perm)		3014			3018	1350		1499		1433	1440	
Volume (vph)	0	1856	16	0	1268	481	12	18	15	452	59	22
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1913	16	0	1307	496	12	19	15	466	61	23
RTOR Reduction (vph)	0	0	0	0	0	83	0	14	0	0	3	0
Lane Group Flow (vph)	0	1929	0	0	1307	413	0	32	0	272	275	0
Turn Type					pm+ov		Split			Split		
Protected Phases		2			6	4	3	3		4	4	
Permitted Phases						6						
Actuated Green, G (s)		62.0			62.0	83.3		4.7		21.3	21.3	
Effective Green, g (s)		62.0			62.0	83.3		4.7		21.3	21.3	
Actuated g/C Ratio		0.62			0.62	0.83		0.05		0.21	0.21	
Clearance Time (s)		4.0			4.0	4.0		4.0		4.0	4.0	
Vehicle Extension (s)		4.5			4.5	4.0		3.0		4.0	4.0	
Lane Grp Cap (vph)		1869			1871	1179		70		305	307	
v/s Ratio Prot		c0.64			0.43	0.07		c0.02		0.19	c0.19	
v/s Ratio Perm						0.23						
v/c Ratio		1.03			0.70	0.35		0.45		0.89	0.90	
Uniform Delay, d1		19.0			12.7	2.0		46.4		38.2	38.3	
Progression Factor		1.00			1.00	1.00		1.00		1.23	1.23	
Incremental Delay, d2		16.8			2.2	0.2		4.6		15.2	15.5	
Delay (s)		35.7			14.9	2.2		51.0		62.2	62.7	
Level of Service		D			B	A		D		E	E	
Approach Delay (s)		35.7			11.4			51.0			62.4	
Approach LOS		D			B			D			E	

Intersection Summary

HCM Average Control Delay	29.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↖		↕	↖
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1509	2978		1509	2993			1540	1350		1545	
Flt Permitted	0.16	1.00		0.09	1.00			0.97	1.00		0.98	
Satd. Flow (perm)	247	2978		136	2993			1540	1350		1545	
Volume (vph)	16	1636	157	479	1065	60	194	116	689	47	70	8
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	17	1740	167	510	1133	64	206	123	733	50	74	9
RTOR Reduction (vph)	0	6	0	0	3	0	0	0	271	0	3	0
Lane Group Flow (vph)	17	1901	0	510	1194	0	0	329	462	0	130	0
Turn Type	Perm		pm+pt			Split		pm+ov		Split		
Protected Phases	6		5 7			4		4 5 7		8 8		
Permitted Phases	6		2					4				
Actuated Green, G (s)	42.8	42.8		54.8	50.8			18.0	27.0		4.0	
Effective Green, g (s)	42.8	42.8		54.8	50.8			18.0	26.0		4.0	
Actuated g/C Ratio	0.43	0.43		0.55	0.51			0.18	0.26		0.04	
Clearance Time (s)	4.0	4.0			4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0			3.0			4.0			3.0	
Lane Grp Cap (vph)	106	1275		184	1520			277	351		62	
v/s Ratio Prot		0.64		c0.22	0.40			0.21	c0.11		c0.08	
v/s Ratio Perm	0.07			c1.30					0.24			
v/c Ratio	0.16	1.49		2.77	0.79			1.19	1.32		2.10	
Uniform Delay, d1	17.6	28.6		48.2	20.1			41.0	37.0		48.0	
Progression Factor	1.00	1.00		1.00	1.00			1.50	3.43		1.00	
Incremental Delay, d2	3.2	225.2		812.3	4.2			88.0	144.4		544.8	
Delay (s)	20.8	253.8		860.5	24.3			149.3	271.2		592.8	
Level of Service	C	F		F	C			F	F		F	
Approach Delay (s)		251.8			274.1			233.5			592.8	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	265.1	HCM Level of Service	F
HCM Volume to Capacity ratio	2.34		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	23.2
Intersection Capacity Utilization	126.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations			↗	↖	↔			↕	↗		↕	↘	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	
Total Lost time (s)			4.0	4.0	4.0			4.0	4.0		4.0		
Lane Util. Factor			1.00	0.95	0.95			0.95	1.00		0.95		
Frbp, ped/bikes			1.00	1.00	0.99			1.00	1.00		1.00		
Flpb, ped/bikes			1.00	1.00	1.00			1.00	1.00		1.00		
Frt			0.86	1.00	0.96			1.00	0.85		1.00		
Flt Protected			1.00	0.95	0.96			1.00	1.00		1.00		
Satd. Flow (prot)			1374	1433	1388			3015	1350		3012		
Flt Permitted			1.00	0.95	0.96			0.93	1.00		1.00		
Satd. Flow (perm)			1374	1433	1388			2814	1350		3012		
Volume (vph)	0	0	7	971	11	130	16	912	1707	0	714	4	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	
Adj. Flow (vph)	0	0	8	1103	12	148	18	1036	1940	0	811	5	
RTOR Reduction (vph)	0	0	4	0	10	0	0	0	698	0	1	0	
Lane Group Flow (vph)	0	0	4	669	584	0	0	1054	1242	0	815	0	
Confl. Peds. (#/hr)	14						14	31				31	
Confl. Bikes (#/hr)							3					2	
Turn Type			custom	Prot			Perm		Perm				
Protected Phases				4	8			2				2	
Permitted Phases			4				2		2				
Actuated Green, G (s)			56.0	56.0	56.0			35.0	35.0			35.0	
Effective Green, g (s)			56.0	56.0	56.0			36.0	36.0			36.0	
Actuated g/C Ratio			0.56	0.56	0.56			0.36	0.36			0.36	
Clearance Time (s)			4.0	4.0	4.0			5.0	5.0			5.0	
Vehicle Extension (s)			7.0	7.0	3.0			3.0	3.0			3.0	
Lane Grp Cap (vph)			769	802	777			1013	486			1084	
v/s Ratio Prot				c0.47	0.42							0.27	
v/s Ratio Perm			0.00					0.37	c0.92				
v/c Ratio			0.01	0.83	0.75			1.04	2.56			0.75	
Uniform Delay, d1			9.7	18.2	16.7			32.0	32.0			28.1	
Progression Factor			1.00	1.00	1.00			0.77	4.93			1.29	
Incremental Delay, d2			0.0	9.0	4.1			21.7	700.3			0.5	
Delay (s)			9.7	27.2	20.9			46.3	858.0			36.7	
Level of Service			A	C	C			D	F			D	
Approach Delay (s)		9.7			24.2			572.3				36.7	
Approach LOS		A			C			F				D	
Intersection Summary													
HCM Average Control Delay			349.1									HCM Level of Service	F
HCM Volume to Capacity ratio			1.51										
Actuated Cycle Length (s)			100.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			127.3%									ICU Level of Service	H
Analysis Period (min)			15										
c Critical Lane Group													



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	0.94	1.00	0.97		1.00	0.99		1.00	1.00	0.93
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1509	1588	1274	1489	1469		1509	2972		1509	3018	1250
Flt Permitted	0.16	1.00	1.00	0.53	1.00		0.10	1.00		0.10	1.00	1.00
Satd. Flow (perm)	252	1588	1274	834	1469		160	2972		164	3018	1250
Volume (vph)	544	384	157	31	287	144	131	1710	82	136	1176	146
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	549	388	159	31	290	145	132	1727	83	137	1188	147
RTOR Reduction (vph)	0	0	70	0	17	0	0	4	0	0	0	36
Lane Group Flow (vph)	549	388	89	31	418	0	132	1806	0	137	1188	111
Conf. Peds. (#/hr)	41		27	27		41	29		45	45		29
Conf. Bikes (#/hr)			1						3			3
Turn Type	pm+pt		Perm	pm+pt		pm+pt		pm+pt		pm+pt		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		4			8			8
Actuated Green, G (s)	43.7	37.8	37.8	24.1	21.2		45.3	39.3		43.8	38.8	38.8
Effective Green, g (s)	44.2	38.3	38.3	23.1	21.2		44.8	39.8		42.8	38.8	38.8
Actuated g/C Ratio	0.44	0.38	0.38	0.23	0.21		0.45	0.40		0.43	0.39	0.39
Clearance Time (s)	3.0	4.5	4.5	3.0	4.0		3.0	4.5		3.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	1.0	2.5		1.0	5.0		1.0	5.0	5.0
Lane Grp Cap (vph)	350	608	488	205	311		139	1183		124	1171	485
v/s Ratio Prot	c0.30	0.24		0.00	0.28		c0.05	c0.61		0.04	0.39	
v/s Ratio Perm	c0.39		0.07	0.03			0.38			0.43		0.09
v/c Ratio	1.57	0.64	0.18	0.15	1.34		0.95	1.53		1.10	1.01	0.23
Uniform Delay, d1	28.6	25.2	20.5	30.2	39.4		23.4	30.1		50.2	30.6	20.6
Progression Factor	1.00	1.00	1.00	0.99	0.99		1.38	0.61		1.10	1.09	1.13
Incremental Delay, d2	269.3	2.2	0.2	0.1	173.3		12.6	237.5		93.7	24.1	0.7
Delay (s)	298.0	27.4	20.7	29.9	212.4		44.8	256.0		148.7	57.4	23.8
Level of Service	F	C	C	C	F		D	F		F	E	C
Approach Delay (s)		162.0			200.3			241.7			62.6	
Approach LOS		F			F			F			E	

Intersection Summary

HCM Average Control Delay	167.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	145.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↕↔		↔↔	↕↔		↔↔	↕↔			↕↕	↕↔
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.95			0.95	1.00
Frbp, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.97			1.00	0.94
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	2932		2927	2998		2927	2846			3018	1271
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	2927	2932		2927	2998		2927	2846			3018	1271
Volume (vph)	667	1744	137	354	937	17	222	1297	297	0	928	586
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	717	1875	147	381	1008	18	239	1395	319	0	998	630
RTOR Reduction (vph)	0	6	0	0	1	0	0	20	0	0	0	260
Lane Group Flow (vph)	717	2017	0	381	1025	0	239	1694	0	0	998	370
Confl. Peds. (#/hr)	157		168	168		157	46		116	116		46
Confl. Bikes (#/hr)			17			14			1			
Turn Type	Prot			Prot			Prot					Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases												4
Actuated Green, G (s)	20.5	44.5		4.0	28.0		4.0	38.0			29.0	29.0
Effective Green, g (s)	20.5	45.0		4.0	28.5		5.0	39.0			30.0	30.0
Actuated g/C Ratio	0.20	0.45		0.04	0.28		0.05	0.39			0.30	0.30
Clearance Time (s)	4.0	4.5		4.0	4.5		5.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0		1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	600	1319		117	854		146	1110			905	381
v/s Ratio Prot	0.24	c0.69		c0.13	0.34		0.08	c0.60			0.33	
v/s Ratio Perm												0.29
v/c Ratio	1.20	1.53		3.26	1.20		1.64	1.53			1.10	0.97
Uniform Delay, d1	39.8	27.5		48.0	35.8		47.5	30.5			35.0	34.6
Progression Factor	0.99	0.50		0.79	1.38		1.00	1.00			1.61	2.73
Incremental Delay, d2	89.4	238.3		1031.9	98.6		315.4	241.6			57.3	29.5
Delay (s)	128.8	252.0		1069.8	148.0		362.9	272.1			113.6	123.7
Level of Service	F	F		F	F		F	F			F	F
Approach Delay (s)		219.8			397.6			283.2			117.5	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	246.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	138.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	2984		1509	2992		1509	2924		1509	2979	
Flt Permitted	0.36	1.00		0.95	1.00		0.10	1.00		0.10	1.00	
Satd. Flow (perm)	579	2984		1509	2992		151	2924		151	2979	
Volume (vph)	96	954	77	294	700	42	95	1671	436	83	1171	111
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	98	973	79	300	714	43	97	1705	445	85	1195	113
RTOR Reduction (vph)	0	6	0	0	4	0	0	26	0	0	8	0
Lane Group Flow (vph)	98	1046	0	300	753	0	97	2124	0	85	1300	0
Turn Type	Perm		Prot		Perm		Perm		Perm			
Protected Phases	8		7		4		6		2			
Permitted Phases	8						6		2			
Actuated Green, G (s)	25.0	25.0		11.0	39.0		41.0	41.0		41.0	41.0	
Effective Green, g (s)	26.0	26.0		10.0	40.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio	0.29	0.29		0.11	0.44		0.47	0.47		0.47	0.47	
Clearance Time (s)	5.0	5.0		3.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	862		168	1330		70	1365		70	1390	
v/s Ratio Prot	c0.35		c0.20		0.25		c0.73		0.44			
v/s Ratio Perm	0.17						0.64		0.56			
v/c Ratio	0.59	1.21		1.79	0.57		1.39	1.56		1.21	0.94	
Uniform Delay, d1	27.4	32.0		40.0	18.6		24.0	24.0		24.0	22.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	14.2	106.5		376.4	1.8		240.3	253.8		176.2	12.9	
Delay (s)	41.6	138.5		416.4	20.3		264.3	277.8		200.2	35.7	
Level of Service	D		F		C		F		F			D
Approach Delay (s)	130.3				132.7		277.2		45.7			
Approach LOS	F				F		F		D			

Intersection Summary

HCM Average Control Delay	167.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	145.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)					4.0			4.0		4.0	4.0	
Lane Util. Factor					1.00			0.95		1.00	0.95	
Frbp, ped/bikes					1.00			0.99		1.00	1.00	
Flpb, ped/bikes					0.99			1.00		1.00	1.00	
Frt					0.91			0.99		1.00	1.00	
Flt Protected					0.98			1.00		0.95	1.00	
Satd. Flow (prot)					1480			3099		1583	3167	
Flt Permitted					0.89			1.00		0.07	1.00	
Satd. Flow (perm)					1334			3099		109	3167	
Volume (vph)	0	0	0	93	0	163	0	1798	113	110	1547	0
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	0	0	0	107	0	187	0	2067	130	126	1778	0
RTOR Reduction (vph)	0	0	0	0	6	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	288	0	0	2192	0	126	1778	0
Confl. Peds. (#/hr)			20	20			47		58	58		47
Confl. Bikes (#/hr)			1						7			1
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)					30.5			61.0		61.0	61.0	
Effective Green, g (s)					31.0			61.0		61.0	61.0	
Actuated g/C Ratio					0.31			0.61		0.61	0.61	
Clearance Time (s)					4.5			4.0		4.0	4.0	
Vehicle Extension (s)					3.0			5.0		5.0	5.0	
Lane Grp Cap (vph)					414			1890		66	1932	
v/s Ratio Prot								0.71			0.56	
v/s Ratio Perm					c0.22					c1.15		
v/c Ratio					0.70			1.16		1.91	0.92	
Uniform Delay, d1					30.4			19.5		19.5	17.3	
Progression Factor					1.00			1.00		1.00	1.00	
Incremental Delay, d2					9.4			78.3		460.0	8.7	
Delay (s)					39.7			97.8		479.5	26.0	
Level of Service					D			F		F	C	
Approach Delay (s)		0.0			39.7			97.8			56.0	
Approach LOS		A			D			F			E	
Intersection Summary												
HCM Average Control Delay			75.8									HCM Level of Service E
HCM Volume to Capacity ratio			1.49									
Actuated Cycle Length (s)			100.0									Sum of lost time (s) 8.0
Intersection Capacity Utilization			97.4%									ICU Level of Service F
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↔↔	↑↑		↗	↑↑	↗	↗	↑↑↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00	1.00	0.91	
Frbp, ped/bikes	1.00	1.00	0.74	1.00	1.00		1.00	1.00	0.79	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3072	3167	1048	3072	3165		1583	3167	1114	1583	4407	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.09	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3072	3167	1048	3072	3165		156	3167	1114	168	4407	
Volume (vph)	164	1594	55	456	759	1	394	1811	448	28	1404	112
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	173	1678	58	480	799	1	415	1906	472	29	1478	118
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	60	0	7	0
Lane Group Flow (vph)	173	1678	58	480	800	0	415	1906	412	29	1589	0
Confl. Peds. (#/hr)	102		193	193		102	173		149	149		173
Confl. Bikes (#/hr)			6			6			9			5
Turn Type	Prot		pm+ov	Prot			pm+pt		pm+ov		pm+pt	
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases			2				8		8		4	
Actuated Green, G (s)	8.0	48.0	55.0	8.0	48.0		48.2	41.2	49.2	42.4	38.3	
Effective Green, g (s)	8.0	49.3	56.3	8.0	49.3		49.6	42.6	50.6	43.8	39.7	
Actuated g/C Ratio	0.07	0.41	0.47	0.07	0.41		0.41	0.36	0.42	0.36	0.33	
Clearance Time (s)	4.0	5.3	4.0	4.0	5.3		4.0	5.4	4.0	4.0	5.4	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	205	1301	527	205	1300		148	1124	507	110	1458	
v/s Ratio Prot	0.06	c0.53	0.01	c0.16	0.25		c0.16	0.60	0.05	0.01	0.36	
v/s Ratio Perm			0.05				c0.99		0.32	0.09		
v/c Ratio	0.84	1.29	0.11	2.34	0.62		2.80	1.70	0.81	0.26	1.09	
Uniform Delay, d1	55.4	35.4	17.8	56.0	27.9		30.3	38.7	30.5	31.2	40.1	
Progression Factor	0.89	0.81	0.72	1.04	0.73		1.20	1.12	1.71	1.00	1.00	
Incremental Delay, d2	3.0	131.0	0.0	614.5	1.6		813.5	313.4	1.0	1.3	52.0	
Delay (s)	52.1	159.5	12.8	672.7	21.9		850.0	357.0	53.2	32.5	92.1	
Level of Service	D	F	B	F	C		F	F	D	C	F	
Approach Delay (s)		145.3			265.9			378.9			91.1	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	239.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.12		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	137.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘	↑↑	↗	↘	↑↑	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3167	1417	1583	3022		1583	3167	1417	1583	3115	
Flt Permitted	0.19	1.00	1.00	0.07	1.00		0.12	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	325	3167	1417	119	3022		207	3167	1417	292	3115	
Volume (vph)	174	1482	135	117	614	268	217	932	220	199	956	117
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	185	1577	144	124	653	285	231	991	234	212	1017	124
RTOR Reduction (vph)	0	0	31	0	34	0	0	0	6	0	8	0
Lane Group Flow (vph)	185	1577	113	124	904	0	231	991	228	212	1133	0
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6		6	2			8		8		4	
Actuated Green, G (s)	54.1	54.1	54.1	54.1	54.1		54.5	54.5	54.5	54.5	54.5	
Effective Green, g (s)	56.0	56.0	56.0	56.0	56.0		56.0	56.0	56.0	56.0	56.0	
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.47		0.47	0.47	0.47	0.47	0.47	
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9		5.5	5.5	5.5	5.5	5.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	152	1478	661	56	1410		97	1478	661	136	1454	
v/s Ratio Prot		0.50			0.30			0.31			0.36	
v/s Ratio Perm	0.57		0.08	c1.04			c1.11		0.16	0.73		
v/c Ratio	1.22	1.07	0.17	2.21	0.64		2.38	0.67	0.35	1.56	0.78	
Uniform Delay, d1	32.0	32.0	18.5	32.0	24.4		32.0	24.8	20.3	32.0	26.8	
Progression Factor	1.16	1.17	1.35	0.75	0.74		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	103.3	31.8	0.1	551.7	0.2		652.1	2.4	1.4	284.1	4.2	
Delay (s)	140.6	69.2	25.0	575.5	18.2		684.1	27.3	21.8	316.1	31.0	
Level of Service	F	E	C	F	B		F	C	C	F	C	
Approach Delay (s)		72.8			83.3			130.6			75.7	
Approach LOS		E			F			F			E	

Intersection Summary

HCM Average Control Delay	90.0	HCM Level of Service	F
HCM Volume to Capacity ratio	2.31		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑		↘	↗	↗		↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00		0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85		1.00		1.00	1.00	0.85		0.92	
Flt Protected	0.95	1.00	1.00		1.00		0.95	0.97	1.00		0.99	
Satd. Flow (prot)	1509	3018	1350		3008		1433	1461	1350		1443	
Flt Permitted	0.13	1.00	1.00		1.00		0.95	0.97	1.00		0.99	
Satd. Flow (perm)	210	3018	1350		3008		1433	1461	1350		1443	
Volume (vph)	92	1543	612	0	1188	26	346	76	53	20	31	86
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	96	1607	638	0	1238	27	360	79	55	21	32	90
RTOR Reduction (vph)	0	0	72	0	1	0	0	0	45	0	51	0
Lane Group Flow (vph)	96	1607	566	0	1264	0	214	225	10	0	92	0
Turn Type	pm+pt		Perm			Split		Perm		Split		
Protected Phases	1	6			2		4	4		3	3	
Permitted Phases	6		6						4			
Actuated Green, G (s)	73.8	67.4	67.4		67.4		21.0	21.0	21.0		10.2	
Effective Green, g (s)	72.8	67.4	67.4		67.4		21.0	21.0	21.0		10.2	
Actuated g/C Ratio	0.61	0.56	0.56		0.56		0.18	0.18	0.18		0.08	
Clearance Time (s)	3.0	4.0	4.0		4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	1.0	6.0	6.0		6.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	186	1695	758		1689		251	256	236		123	
v/s Ratio Prot	c0.02	c0.53			0.42		0.15	c0.15			c0.06	
v/s Ratio Perm	0.29		0.42						0.01			
v/c Ratio	0.52	0.95	0.75		0.75		0.85	0.88	0.04		0.75	
Uniform Delay, d1	14.1	24.7	19.8		19.9		48.0	48.3	41.1		53.6	
Progression Factor	1.28	0.61	0.52		1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	1.6	0.6		3.1		23.3	27.0	0.1		21.6	
Delay (s)	18.1	16.6	10.9		23.0		71.3	75.3	41.2		75.2	
Level of Service	B	B	B		C		E	E	D		E	
Approach Delay (s)		15.1			23.0			69.8			75.2	
Approach LOS		B			C			E			E	

Intersection Summary

HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷	↶	↷	↷	↶
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00	0.84	1.00	0.94	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3002		1509	2915		1509	3018	1128	1509	2711	
Flt Permitted	0.07	1.00		0.07	1.00		0.17	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	107	3002		108	2915		276	3018	1128	276	2711	
Volume (vph)	150	2484	37	204	1454	110	30	1099	144	46	692	294
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	165	2730	41	224	1598	121	33	1208	158	51	760	323
RTOR Reduction (vph)	0	1	0	0	6	0	0	0	67	0	47	0
Lane Group Flow (vph)	165	2770	0	224	1713	0	33	1208	91	51	1036	0
Conf. Peds. (#/hr)	277		134	134		277	133		103	103		133
Conf. Bikes (#/hr)			12			3			1			2
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		
Protected Phases	5	2		1	6			8				4
Permitted Phases	2			6			8		8		4	
Actuated Green, G (s)	65.5	59.5		65.0	59.0		23.0	23.0	23.0	23.0	23.0	
Effective Green, g (s)	65.5	59.5		64.5	59.0		23.0	23.0	23.0	23.0	23.0	
Actuated g/C Ratio	0.66	0.60		0.64	0.59		0.23	0.23	0.23	0.23	0.23	
Clearance Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	1.0	5.0		1.0	5.0		4.0	4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	154	1786		147	1720		63	694	259	63	624	
v/s Ratio Prot	0.06	c0.92		c0.08	0.59			c0.40				0.38
v/s Ratio Perm	0.64			0.90			0.12		0.08	0.18		
v/c Ratio	1.07	1.55		1.52	1.00		0.52	1.74	0.35	0.81	1.66	
Uniform Delay, d1	27.1	20.2		49.5	20.4		33.7	38.5	32.3	36.4	38.5	
Progression Factor	1.10	0.96		0.69	1.69		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	43.7	248.1		238.9	5.7		27.8	339.3	3.7	67.8	304.2	
Delay (s)	73.5	267.6		272.8	40.2		61.5	377.8	36.0	104.2	342.7	
Level of Service	E	F		F	D		E	F	D	F	F	
Approach Delay (s)		256.6			67.0			331.7			332.0	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	232.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	149.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↗		↖	↗	↗
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1509	3010		1509	1588	1350	1509	2970		1509	3018	1350
Flt Permitted	0.22	1.00		0.19	1.00	1.00	0.21	1.00		0.11	1.00	1.00
Satd. Flow (perm)	344	3010		305	1588	1350	327	2970		176	3018	1350
Volume (vph)	117	814	15	266	514	181	100	1144	135	244	872	157
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	129	895	16	292	565	199	110	1257	148	268	958	173
RTOR Reduction (vph)	0	2	0	0	0	19	0	12	0	0	0	90
Lane Group Flow (vph)	129	909	0	292	565	180	110	1393	0	268	958	83
Turn Type	Perm			Perm		Perm	Perm			Perm		Perm
Protected Phases		2			2			4			4	
Permitted Phases	2			2		2	4			4		4
Actuated Green, G (s)	31.0	31.0		31.0	31.0	31.0	36.0	36.0		36.0	36.0	36.0
Effective Green, g (s)	31.0	31.0		31.0	31.0	31.0	36.0	36.0		36.0	36.0	36.0
Actuated g/C Ratio	0.41	0.41		0.41	0.41	0.41	0.48	0.48		0.48	0.48	0.48
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	142	1244		126	656	558	157	1426		84	1449	648
v/s Ratio Prot		0.30			0.36			0.47			0.32	
v/s Ratio Perm	0.37			c0.96		0.13	0.34			c1.52		0.06
v/c Ratio	0.91	0.73		2.32	0.86	0.32	0.70	0.98		3.19	0.66	0.13
Uniform Delay, d1	20.7	18.5		22.0	20.0	14.9	15.3	19.1		19.5	14.9	10.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	54.3	3.8		617.0	13.9	1.5	22.9	18.9		1016.0	2.4	0.4
Delay (s)	74.9	22.3		639.0	34.0	16.4	38.2	38.0		1035.5	17.2	11.2
Level of Service	E	C		F	C	B	D	D		F	B	B
Approach Delay (s)		28.8			198.0			38.0			211.6	
Approach LOS		C			F			D			F	

Intersection Summary

HCM Average Control Delay	118.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.78		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	115.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↗	↖	↗	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.91	0.95	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1509	2979		1509	2992		1433	1417	1282	1509	1571	
Flt Permitted	0.19	1.00		0.05	1.00		0.95	0.98	1.00	0.95	1.00	
Satd. Flow (perm)	304	2979		85	2992		1433	1417	1282	1509	1571	
Volume (vph)	14	1568	145	431	1091	65	484	213	529	21	328	26
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	15	1651	153	454	1148	68	509	224	557	22	345	27
RTOR Reduction (vph)	0	6	0	0	4	0	0	0	174	0	3	0
Lane Group Flow (vph)	15	1798	0	454	1213	0	364	369	383	22	369	0
Turn Type	Perm			pm+pt			Split		pm+ov	Split		
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6			2					4			
Actuated Green, G (s)	71.0	71.0		78.0	78.0		13.0	13.0	17.0	18.0	18.0	
Effective Green, g (s)	71.0	71.0		78.0	78.0		13.0	13.0	16.0	17.0	17.0	
Actuated g/C Ratio	0.59	0.59		0.65	0.65		0.11	0.11	0.13	0.14	0.14	
Clearance Time (s)	4.0	4.0		3.0	4.0		4.0	4.0	3.0	3.0	3.0	
Vehicle Extension (s)	4.5	4.5		1.0	4.5		2.0	2.0	1.0	2.0	2.0	
Lane Grp Cap (vph)	180	1763		91	1945		155	154	214	214	223	
v/s Ratio Prot		0.60		c0.12	0.41		0.25	c0.26	0.04	0.01	c0.24	
v/s Ratio Perm	0.05			c3.13					0.25			
v/c Ratio	0.08	1.02		4.99	0.62		2.35	2.40	1.79	0.10	1.66	
Uniform Delay, d1	10.5	24.5		27.3	12.4		53.5	53.5	52.0	44.9	51.5	
Progression Factor	1.00	1.00		2.26	0.65		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	26.6		1809.9	0.9		626.4	647.7	373.1	1.0	314.6	
Delay (s)	11.4	51.1		1871.5	8.9		679.9	701.2	425.1	45.8	366.1	
Level of Service	B	D		F	A		F	F	F	D	F	
Approach Delay (s)		50.8			515.3			576.0			348.2	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	354.4	HCM Level of Service	F
HCM Volume to Capacity ratio	4.09		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	148.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.94			0.97		1.00	0.98		1.00	0.98	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1492			1490		1509	2971		1509	2955	
Flt Permitted		0.97			0.71		0.22	1.00		0.17	1.00	
Satd. Flow (perm)		1451			1087		347	2971		276	2955	
Volume (vph)	49	250	211	44	10	17	149	1084	126	10	774	125
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	51	260	220	46	10	18	155	1129	131	10	806	130
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	531	0	0	74	0	155	1260	0	10	936	0
Turn Type		Perm		Perm		Perm		Perm		Perm		Perm
Protected Phases		2		6		6		4		8		8
Permitted Phases		2		6		4		4		8		8
Actuated Green, G (s)		19.4			19.4		24.0	24.0		24.0		24.0
Effective Green, g (s)		20.0			20.0		23.0	23.0		23.0		23.0
Actuated g/C Ratio		0.39			0.39		0.45	0.45		0.45		0.45
Clearance Time (s)		4.6			4.6		3.0	3.0		3.0		3.0
Vehicle Extension (s)		4.5			4.5		3.0	3.0		3.0		3.0
Lane Grp Cap (vph)		569			426		156	1340		124		1333
v/s Ratio Prot								0.42				0.32
v/s Ratio Perm		c0.37			0.07		c0.45			0.04		
v/c Ratio		0.93			0.17		0.99	0.94		0.08		0.70
Uniform Delay, d1		14.9			10.1		13.9	13.3		8.0		11.2
Progression Factor		1.00			1.00		1.00	1.00		1.00		1.00
Incremental Delay, d2		24.4			0.9		69.8	12.9		0.3		1.7
Delay (s)		39.3			11.0		83.7	26.3		8.3		12.9
Level of Service		D			B		F	C		A		B
Approach Delay (s)		39.3			11.0			32.6				12.9
Approach LOS		D			B			C				B

Intersection Summary

HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	51.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	0.99			0.92			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	
Frt	1.00	1.00		1.00	0.99			0.92			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.98	
Satd. Flow (prot)	1509	3000		1509	2978			1325			1524	
Flt Permitted	0.07	1.00		0.08	1.00			0.97			0.47	
Satd. Flow (perm)	114	3000		123	2978			1287			727	
Volume (vph)	16	2204	33	239	1488	57	49	213	369	38	54	8
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	17	2345	35	254	1583	61	52	227	393	40	57	9
RTOR Reduction (vph)	0	1	0	0	3	0	0	50	0	0	4	0
Lane Group Flow (vph)	17	2379	0	254	1641	0	0	622	0	0	102	0
Conf. Peds. (#/hr)	63		90	90		63	52		90	90		52
Conf. Bikes (#/hr)			4			3						1
Turn Type	pm+pt			pm+pt			Perm			Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	65.5	58.5		55.0	51.5			26.0			26.0	
Effective Green, g (s)	65.5	58.5		54.5	51.5			26.5			26.5	
Actuated g/C Ratio	0.66	0.58		0.54	0.52			0.26			0.26	
Clearance Time (s)	3.5	4.0		3.5	4.0			4.5			4.5	
Vehicle Extension (s)	1.0	5.0		1.0	5.0			3.0			3.0	
Lane Grp Cap (vph)	214	1755		109	1534			341			193	
v/s Ratio Prot	0.01	c0.79		c0.07	0.55							
v/s Ratio Perm	0.04			c1.20				c0.48			0.14	
v/c Ratio	0.08	1.36		2.33	1.07			1.82			0.53	
Uniform Delay, d1	16.4	20.8		50.7	24.2			36.8			31.4	
Progression Factor	1.00	1.00		1.83	0.58			1.00			1.00	
Incremental Delay, d2	0.7	163.9		601.2	33.0			382.2			2.8	
Delay (s)	17.1	184.6		694.2	47.0			418.9			34.2	
Level of Service	B	F		F	D			F			C	
Approach Delay (s)		183.4			133.7			418.9			34.2	
Approach LOS		F			F			F			C	

Intersection Summary

HCM Average Control Delay	192.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.17		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	145.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖	↖	↕	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3152		1583	3079		1583	1667	1417	1583	1637	
Flt Permitted	0.20	1.00		0.20	1.00		0.17	1.00	1.00	0.31	1.00	
Satd. Flow (perm)	327	3152		327	3079		286	1667	1417	509	1637	
Volume (vph)	102	1468	48	91	712	160	74	564	171	64	650	87
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	106	1529	50	95	742	167	77	588	178	67	677	91
RTOR Reduction (vph)	0	4	0	0	32	0	0	0	1	0	8	0
Lane Group Flow (vph)	106	1575	0	95	877	0	77	588	177	67	760	0
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases	6			2			8		8		4	
Permitted Phases	6			2			8		8		4	
Actuated Green, G (s)	20.1	20.1		20.1	20.1		31.0	31.0	31.0	31.0	31.0	
Effective Green, g (s)	20.4	20.4		20.4	20.4		31.6	31.6	31.6	31.6	31.6	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.53	0.53	0.53	0.53	0.53	
Clearance Time (s)	4.3	4.3		4.3	4.3		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	1072		111	1047		151	878	746	268	862	
v/s Ratio Prot	c0.50			0.28			0.35			c0.46		
v/s Ratio Perm	0.32			0.29			0.27			0.12		0.13
v/c Ratio	0.95	1.47		0.86	0.84		0.51	0.67	0.24	0.25	0.88	
Uniform Delay, d1	19.4	19.8		18.4	18.3		9.2	10.4	7.7	7.7	12.5	
Progression Factor	1.00	1.00		1.03	0.99		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	74.0	216.3		7.7	0.8		11.8	4.0	0.7	2.2	12.6	
Delay (s)	93.3	236.1		26.7	18.8		21.0	14.4	8.4	10.0	25.1	
Level of Service	F	F		C	B		C	B	A	A	C	
Approach Delay (s)	227.1			19.5			13.8			23.9		
Approach LOS	F			B			B			C		

Intersection Summary

HCM Average Control Delay	99.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	121.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↙	↕			↕			↕	↗
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)				4.0	4.0			4.0			4.0	4.0
Lane Util. Factor				1.00	0.95			0.95			0.95	1.00
Frt				1.00	1.00			1.00			1.00	0.85
Flt Protected				0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)				1509	3006			3004			3018	1350
Flt Permitted				0.95	1.00			0.88			1.00	1.00
Satd. Flow (perm)				1509	3006			2652			3018	1350
Volume (vph)	0	0	0	186	1362	36	40	385	0	0	400	100
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	207	1513	40	44	428	0	0	444	111
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	207	1551	0	0	472	0	0	444	111
Turn Type				custom			custom					Free
Protected Phases				2	2		3	3			1	
Permitted Phases				4	4		6	6				Free
Actuated Green, G (s)				34.9	34.9			27.5			20.0	100.0
Effective Green, g (s)				33.5	33.5			26.5			20.0	100.0
Actuated g/C Ratio				0.34	0.34			0.26			0.20	1.00
Clearance Time (s)				3.0	3.0			3.0			4.0	
Vehicle Extension (s)				1.0	1.0			1.0			4.0	
Lane Grp Cap (vph)				566	1127			717			604	1350
v/s Ratio Prot				0.05	c0.19			c0.03			c0.15	
v/s Ratio Perm				0.09	0.32			c0.15				0.08
v/c Ratio				0.37	1.38			0.66			0.74	0.08
Uniform Delay, d1				25.6	33.2			32.7			37.5	0.0
Progression Factor				1.00	1.00			0.39			1.00	1.00
Incremental Delay, d2				1.8	175.0			0.9			7.8	0.1
Delay (s)				27.4	208.2			13.7			45.3	0.1
Level of Service				C	F			B			D	A
Approach Delay (s)		0.0			186.9			13.7			36.2	
Approach LOS		A			F			B			D	

Intersection Summary			
HCM Average Control Delay	127.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↖		↕			↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.94			0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.99	
Satd. Flow (prot)	1304	2595		1304	2608	1167		1277			1336	
Flt Permitted	0.10	1.00		0.08	1.00	1.00		0.82			0.90	
Satd. Flow (perm)	132	2595		104	2608	1167		1061			1208	
Volume (vph)	19	1628	55	67	1565	37	68	76	105	34	131	25
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	20	1678	57	69	1613	38	70	78	108	35	135	26
RTOR Reduction (vph)	0	2	0	0	0	13	0	21	0	0	7	0
Lane Group Flow (vph)	20	1733	0	69	1613	25	0	235	0	0	189	0
Turn Type	Perm			Perm			Perm	Perm			Perm	
Protected Phases	2			6			6	8			4	
Permitted Phases	2			6			6	8			4	
Actuated Green, G (s)	59.6	59.6		59.6	59.6	59.6		21.3			21.3	
Effective Green, g (s)	60.2	60.2		60.2	60.2	60.2		21.8			21.8	
Actuated g/C Ratio	0.67	0.67		0.67	0.67	0.67		0.24			0.24	
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6		4.5			4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0		2.0			2.0	
Lane Grp Cap (vph)	88	1736		70	1744	781		257			293	
v/s Ratio Prot	c0.67			0.62								
v/s Ratio Perm	0.15			0.66		0.02		c0.22			0.16	
v/c Ratio	0.23	1.00		0.99	0.92	0.03		0.91			0.65	
Uniform Delay, d1	5.8	14.8		14.5	12.9	5.0		33.2			30.6	
Progression Factor	0.41	1.07		0.98	0.97	1.93		1.00			1.00	
Incremental Delay, d2	0.5	6.1		58.7	3.8	0.0		33.4			3.6	
Delay (s)	2.9	21.9		72.8	16.4	9.8		66.6			34.3	
Level of Service	A	C		E	B	A		E			C	
Approach Delay (s)	21.7			18.5				66.6			34.3	
Approach LOS	C			B				E			C	

Intersection Summary

HCM Average Control Delay	23.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	110.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕			↕			↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.98	
Satd. Flow (prot)	1304	2602		1304	2593			1281			1320	
Flt Permitted	0.15	1.00		0.15	1.00			0.96			0.77	
Satd. Flow (perm)	211	2602		211	2593			1231			1036	
Volume (vph)	29	1492	24	171	1406	54	23	131	134	130	167	54
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	32	1622	26	186	1528	59	25	142	146	141	182	59
RTOR Reduction (vph)	0	2	0	0	5	0	0	3	0	0	5	0
Lane Group Flow (vph)	32	1646	0	186	1582	0	0	310	0	0	377	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	25.5	25.5		25.5	25.5			25.5			25.5	
Effective Green, g (s)	26.0	26.0		26.0	26.0			26.0			26.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.43			0.43	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0			2.0	
Lane Grp Cap (vph)	91	1128		91	1124			533			449	
v/s Ratio Prot		0.63			0.61							
v/s Ratio Perm	0.15			0.88				0.25			0.36	
v/c Ratio	0.35	1.46		2.04	1.41			0.58			0.84	
Uniform Delay, d1	11.4	17.0		17.0	17.0			12.9			15.2	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	10.4	211.7		505.8	188.9			4.6			17.1	
Delay (s)	21.7	228.7		522.8	205.9			17.4			32.2	
Level of Service	C	F		F	F			B			C	
Approach Delay (s)		224.8			239.2			17.4			32.2	
Approach LOS		F			F			B			C	

Intersection Summary

HCM Average Control Delay	197.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	131.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	1639		1583	1667	1417	1583	1667	1417	1583	1667	1417
Flt Permitted	0.42	1.00		0.15	1.00	1.00	0.27	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)	698	1639		256	1667	1417	448	1667	1417	369	1667	1417
Volume (vph)	100	567	72	84	357	89	84	543	96	100	497	77
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	110	623	79	92	392	98	92	597	105	110	546	85
RTOR Reduction (vph)	0	7	0	0	0	98	0	0	60	0	0	48
Lane Group Flow (vph)	110	695	0	92	392	0	92	597	46	110	546	37
Turn Type	Perm			Perm		NA	Perm		Perm	Perm		custom
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		4
Actuated Green, G (s)	25.5	25.5		25.5	25.5	0.0	25.5	25.5	25.5	25.5	25.5	25.5
Effective Green, g (s)	26.0	26.0		26.0	26.0	0.0	26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.43	0.43		0.43	0.43	0.00	0.43	0.43	0.43	0.43	0.43	0.43
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	302	710		111	722	0	194	722	614	160	722	614
v/s Ratio Prot		c0.42			0.24			c0.36				0.33
v/s Ratio Perm	0.16			0.36			0.21		0.03	0.30		0.03
v/c Ratio	0.36	0.98		0.83	0.54	0.00	0.47	0.83	0.07	0.69	0.76	0.06
Uniform Delay, d1	11.4	16.7		15.0	12.6	30.0	12.1	15.0	10.0	13.7	14.3	9.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4	28.9		48.3	2.9	0.0	8.1	10.5	0.2	21.5	7.3	0.2
Delay (s)	14.8	45.6		63.3	15.5	30.0	20.2	25.5	10.2	35.2	21.6	10.1
Level of Service	B	D		E	B	C	C	C	B	D	C	B
Approach Delay (s)		41.4			25.5			22.9			22.3	
Approach LOS		D			C			C			C	

Intersection Summary

HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗	↖	↖	↖	↖	↖	↖	↖
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.84	1.00	1.00	0.87	1.00	1.00	0.86
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2577		1304	2608	979	1300	1373	1012	1304	1373	1006
Flt Permitted	0.12	1.00		0.12	1.00	1.00	0.13	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	171	2577		164	2608	979	180	1373	1012	175	1373	1006
Volume (vph)	87	1336	69	127	1527	66	96	617	217	169	582	95
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	89	1363	70	130	1558	67	98	630	221	172	594	97
RTOR Reduction (vph)	0	4	0	0	0	36	0	0	97	0	0	63
Lane Group Flow (vph)	89	1429	0	130	1558	31	98	630	124	172	594	34
Conf. Peds. (#/hr)	65		58	58		65	125		121	121		125
Conf. Bikes (#/hr)			7			5			3			7
Turn Type	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	35.5	31.5		38.3	32.9	32.9	33.9	29.9	29.9	35.9	30.9	30.9
Effective Green, g (s)	36.7	32.1		39.5	33.5	33.5	34.9	30.4	30.4	36.9	31.4	31.4
Actuated g/C Ratio	0.41	0.36		0.44	0.37	0.37	0.39	0.34	0.34	0.41	0.35	0.35
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	128	919		148	971	364	126	464	342	141	479	351
v/s Ratio Prot	0.04	0.55		c0.06	c0.60		0.04	c0.46		c0.07	0.43	
v/s Ratio Perm	0.25			0.33		0.03	0.26		0.12	0.43		0.03
v/c Ratio	0.70	1.56		0.88	1.60	0.09	0.78	1.36	0.36	1.22	1.24	0.10
Uniform Delay, d1	22.7	28.9		43.5	28.2	18.3	21.8	29.8	22.5	25.2	29.3	19.7
Progression Factor	1.44	0.70		1.72	1.30	2.23	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.5	250.3		21.3	274.1	0.2	25.4	174.6	0.7	146.7	124.8	0.1
Delay (s)	34.2	270.4		96.2	310.9	41.1	47.3	204.4	23.1	171.9	154.1	19.9
Level of Service	C	F		F	F	D	D	F	C	F	F	B
Approach Delay (s)		256.6			284.7			145.9			142.6	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	226.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	133.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↖		↗	↖	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frbp, ped/bikes		1.00	0.96		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		0.99	1.00		1.00	1.00	
Frt		1.00	0.85		0.99		1.00	0.99		1.00	1.00	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1656	1357		1645		1563	1650		1583	1657	
Flt Permitted		0.96	1.00		0.80		0.26	1.00		0.14	1.00	
Satd. Flow (perm)		1602	1357		1324		428	1650		241	1657	
Volume (vph)	35	348	110	19	167	8	59	871	38	37	707	18
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	35	352	111	19	169	8	60	880	38	37	714	18
RTOR Reduction (vph)	0	0	83	0	2	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	387	28	0	194	0	60	916	0	37	730	0
Conf. Peds. (#/hr)	28		18	18		28	29		34	34		29
Conf. Bikes (#/hr)			11			9			1			2
Turn Type	Perm		Perm	Perm		Perm		Perm		Perm		
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)		14.9	14.9		14.9		36.1	36.1		36.1	36.1	
Effective Green, g (s)		15.4	15.4		15.4		36.6	36.6		36.6	36.6	
Actuated g/C Ratio		0.26	0.26		0.26		0.61	0.61		0.61	0.61	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		0.2	0.2		0.2		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		411	348		340		261	1007		147	1011	
v/s Ratio Prot								c0.55				0.44
v/s Ratio Perm		c0.24	0.02		0.15		0.14			0.15		
v/c Ratio		0.94	0.08		0.57		0.23	0.91		0.25	0.72	
Uniform Delay, d1		21.9	16.9		19.4		5.3	10.2		5.4	8.2	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		29.6	0.0		1.3		2.0	13.5		4.1	4.5	
Delay (s)		51.5	17.0		20.7		7.4	23.7		9.5	12.6	
Level of Service		D	B		C		A	C		A	B	
Approach Delay (s)		43.8			20.7			22.7			12.5	
Approach LOS		D			C			C			B	
Intersection Summary												
HCM Average Control Delay			23.6				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.92									
Actuated Cycle Length (s)			60.0				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			90.8%				ICU Level of Service				E	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↘	↘	↗	↘	↘	↗	↘	↘	↗	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2608	1167	1304	2608	1167	1304	1373	1167	1304	1373	1167
Flt Permitted	0.14	1.00	1.00	0.10	1.00	1.00	0.25	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)	196	2608	1167	134	2608	1167	349	1373	1167	363	1373	1167
Volume (vph)	89	1280	69	54	1051	256	57	531	97	208	542	88
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	92	1320	71	56	1084	264	59	547	100	214	559	91
RTOR Reduction (vph)	0	0	39	0	0	124	0	0	11	0	0	25
Lane Group Flow (vph)	92	1320	32	56	1084	140	59	547	89	214	559	67
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		2			6			8				4
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5
Effective Green, g (s)	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0
Actuated g/C Ratio	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	89	1188	532	61	1188	532	159	625	532	165	625	532
v/s Ratio Prot		c0.51			0.42			0.40				0.41
v/s Ratio Perm	0.47		0.03	0.42		0.12	0.17		0.08	c0.59		0.06
v/c Ratio	1.03	1.11	0.06	0.92	0.91	0.26	0.37	0.88	0.17	1.30	0.89	0.12
Uniform Delay, d1	24.5	24.5	13.7	22.9	22.8	15.2	16.1	22.2	14.4	24.5	22.5	14.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	104.9	62.2	0.2	93.5	12.1	1.2	1.5	13.0	0.1	170.9	15.2	0.1
Delay (s)	129.4	86.7	13.9	116.4	34.9	16.4	17.5	35.2	14.6	195.4	37.7	14.3
Level of Service	F	F	B	F	C	B	B	D	B	F	D	B
Approach Delay (s)		85.8			34.7			30.8			74.3	
Approach LOS		F			C			C			E	

Intersection Summary

HCM Average Control Delay	58.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	119.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑	↗	↘	↗	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.80	1.00	1.00	0.86	1.00	1.00	0.96	1.00	0.99	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.99
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2608	933	1304	2608	1006	1304	1373	1116	1293	1350	1350
Flt Permitted	0.10	1.00	1.00	0.09	1.00	1.00	0.11	1.00	1.00	0.19	1.00	1.00
Satd. Flow (perm)	133	2608	933	119	2608	1006	153	1373	1116	252	1350	1350
Volume (vph)	54	1382	30	104	1268	59	150	543	191	81	624	53
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	57	1455	32	109	1335	62	158	572	201	85	657	56
RTOR Reduction (vph)	0	0	16	0	0	30	0	0	9	0	4	0
Lane Group Flow (vph)	57	1455	16	109	1335	32	158	572	192	85	709	0
Confl. Peds. (#/hr)	50		75	75		50	47		29	29		47
Confl. Bikes (#/hr)			11			2			2			4
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		2			6			8				4
Permitted Phases	2		2	6		6	8		8		4	
Actuated Green, G (s)	45.4	45.4	45.4	45.4	45.4	45.4	35.5	35.5	35.5	35.5	35.5	35.5
Effective Green, g (s)	46.0	46.0	46.0	46.0	46.0	46.0	36.0	36.0	36.0	36.0	36.0	36.0
Actuated g/C Ratio	0.51	0.51	0.51	0.51	0.51	0.51	0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	68	1333	477	61	1333	514	61	549	446	101	540	540
v/s Ratio Prot		0.56			0.51			0.42			0.53	
v/s Ratio Perm	0.43		0.02	c0.91		0.03	c1.04		0.17	0.34		
v/c Ratio	0.84	1.09	0.03	1.79	1.00	0.06	2.59	1.04	0.43	0.84	1.31	
Uniform Delay, d1	18.8	22.0	10.9	22.0	22.0	11.1	27.0	27.0	19.6	24.4	27.0	
Progression Factor	1.20	1.01	2.34	1.09	1.02	1.37	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	24.2	44.7	0.0	360.0	7.7	0.0	760.8	49.8	0.7	43.7	154.0	
Delay (s)	46.7	66.8	25.7	383.9	30.1	15.2	787.8	76.8	20.2	68.1	181.0	
Level of Service	D	E	C	F	C	B	F	E	C	E	F	
Approach Delay (s)		65.2			55.1			185.2			168.9	
Approach LOS		E			E			F			F	

Intersection Summary

HCM Average Control Delay	102.7	HCM Level of Service	F
HCM Volume to Capacity ratio	2.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	133.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2586		1304	2562		1304	2539		1304	2561	
Flt Permitted	0.11	1.00		0.10	1.00		0.14	1.00		0.20	1.00	
Satd. Flow (perm)	148	2586		138	2562		189	2539		277	2561	
Volume (vph)	173	1282	74	121	1170	155	46	573	123	21	893	121
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	186	1378	80	130	1258	167	49	616	132	23	960	130
RTOR Reduction (vph)	0	5	0	0	12	0	0	20	0	0	12	0
Lane Group Flow (vph)	186	1453	0	130	1413	0	49	728	0	23	1078	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			8		4
Permitted Phases	2			6			8			8		4
Actuated Green, G (s)	52.5	52.5		52.5	52.5		28.5	28.5		28.5	28.5	
Effective Green, g (s)	53.0	53.0		53.0	53.0		29.0	29.0		29.0	29.0	
Actuated g/C Ratio	0.59	0.59		0.59	0.59		0.32	0.32		0.32	0.32	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	87	1523		81	1509		61	818		89	825	
v/s Ratio Prot		0.56			0.55			0.29			c0.42	
v/s Ratio Perm	c1.26			0.94			0.26			0.08		
v/c Ratio	2.14	0.95		1.60	0.94		0.80	0.89		0.26	1.31	
Uniform Delay, d1	18.5	17.4		18.5	17.0		27.9	29.0		22.5	30.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	548.4	14.5		322.1	12.3		68.1	13.9		6.9	147.0	
Delay (s)	566.9	31.9		340.6	29.3		96.0	42.8		29.5	177.5	
Level of Service	F	C		F	C		F	D		C	F	
Approach Delay (s)		92.4			55.3			46.1			174.4	
Approach LOS		F			E			D			F	

Intersection Summary

HCM Average Control Delay	91.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	119.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.97	1.00		0.98	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2578		1304	2580		1267	1308		1283	1312	
Flt Permitted	0.09	1.00		0.08	1.00		0.55	1.00		0.38	1.00	
Satd. Flow (perm)	117	2578		111	2580		733	1308		515	1312	
Volume (vph)	61	1374	80	62	1386	47	54	240	77	32	154	43
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	64	1446	84	65	1459	49	57	253	81	34	162	45
RTOR Reduction (vph)	0	4	0	0	3	0	0	14	0	0	11	0
Lane Group Flow (vph)	64	1526	0	65	1505	0	57	320	0	34	196	0
Conf. Peds. (#/hr)	65		30	30		65	31		25	25		31
Conf. Bikes (#/hr)			5			9			3			1
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	51.2	51.2		51.2	51.2		29.7	29.7		29.7	29.7	
Effective Green, g (s)	51.8	51.8		51.8	51.8		30.2	30.2		30.2	30.2	
Actuated g/C Ratio	0.58	0.58		0.58	0.58		0.34	0.34		0.34	0.34	
Clearance Time (s)	4.6	4.6		4.6	4.6		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	67	1484		64	1485		246	439		173	440	
v/s Ratio Prot		c0.59			0.58			c0.24			0.15	
v/s Ratio Perm	0.55			0.59			0.08			0.07		
v/c Ratio	0.96	1.03		1.02	1.01		0.23	0.73		0.20	0.44	
Uniform Delay, d1	18.0	19.1		19.1	19.1		21.5	26.3		21.3	23.4	
Progression Factor	0.85	0.89		1.16	1.17		1.07	0.89		1.00	1.00	
Incremental Delay, d2	89.8	29.1		37.7	10.8		0.2	4.8		0.2	0.3	
Delay (s)	105.1	46.1		59.9	33.2		23.2	28.2		21.5	23.6	
Level of Service	F	D		E	C		C	C		C	C	
Approach Delay (s)		48.4			34.3			27.5			23.3	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	38.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	103.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↑	↕	↕	↕	↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1667	1417		1655	1417	1583	1667	1417	1583	1648	
Flt Permitted		1.00	1.00		0.85	1.00	0.46	1.00	1.00	0.46	1.00	
Satd. Flow (perm)		1667	1417		1410	1417	770	1667	1417	768	1648	
Volume (vph)	0	258	118	49	302	35	10	342	91	15	316	25
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	0	300	137	57	351	41	12	398	106	17	367	29
RTOR Reduction (vph)	0	0	92	0	0	28	0	0	44	0	3	0
Lane Group Flow (vph)	0	300	45	0	408	13	12	398	62	17	394	0
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4		4	2		2	2		
Actuated Green, G (s)		29.0	29.0		29.0	29.0	52.0	52.0	52.0	52.0	52.0	
Effective Green, g (s)		29.5	29.5		29.5	29.5	52.5	52.5	52.5	52.5	52.5	
Actuated g/C Ratio		0.33	0.33		0.33	0.33	0.58	0.58	0.58	0.58	0.58	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	0.2	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)		546	464		462	464	449	972	827	448	961	
v/s Ratio Prot		0.18						0.24			c0.24	
v/s Ratio Perm			0.03		c0.29	0.01	0.02		0.04	0.02		
v/c Ratio		0.55	0.10		0.88	0.03	0.03	0.41	0.07	0.04	0.41	
Uniform Delay, d1		24.8	21.0		28.6	20.5	7.9	10.3	8.2	8.0	10.3	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.82	0.83	
Incremental Delay, d2		1.1	0.1		17.8	0.0	0.1	1.3	0.2	0.1	1.1	
Delay (s)		25.9	21.1		46.4	20.6	8.0	11.5	8.3	6.7	9.6	
Level of Service		C	C		D	C	A	B	A	A	A	
Approach Delay (s)		24.4			44.0			10.8			9.5	
Approach LOS		C			D			B			A	

Intersection Summary

HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.91		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2586		1304	2583		1304	1254		1304	1332	
Flt Permitted	0.16	1.00		0.16	1.00		0.30	1.00		0.15	1.00	
Satd. Flow (perm)	220	2586		220	2583		415	1254		203	1332	
Volume (vph)	88	1072	65	309	869	60	10	301	405	56	384	94
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	97	1178	71	340	955	66	11	331	445	62	422	103
RTOR Reduction (vph)	0	7	0	0	8	0	0	13	0	0	15	0
Lane Group Flow (vph)	97	1242	0	340	1013	0	11	763	0	62	510	0
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	24.5	24.5		24.5	24.5		26.5	26.5		26.5	26.5	
Effective Green, g (s)	25.0	25.0		25.0	25.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.45	0.45		0.45	0.45	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	92	1078		92	1076		187	564		91	599	
v/s Ratio Prot		0.48			0.39			c0.61			0.38	
v/s Ratio Perm	0.44			c1.55			0.03			0.30		
v/c Ratio	1.05	1.15		3.70	0.94		0.06	1.35		0.68	0.85	
Uniform Delay, d1	17.5	17.5		17.5	16.8		9.3	16.5		13.1	14.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	109.3	79.4		1239.3	16.5		0.0	170.0		15.4	10.8	
Delay (s)	126.8	96.9		1256.8	33.3		9.4	186.5		28.5	25.6	
Level of Service	F	F		F	C		A	F		C	C	
Approach Delay (s)		99.0			339.0			184.1			25.9	
Approach LOS		F			F			F			C	

Intersection Summary

HCM Average Control Delay	184.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.49		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	139.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↖		↕	↖
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Volume (veh/h)	29	1329	33	50	1299	51	15	30	108	9	96	55
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	31	1429	35	54	1397	55	16	32	116	10	103	59
Pedestrians	16			25			60			113		
Lane Width (ft)	12.0			12.0			12.0			12.0		
Walking Speed (ft/s)	4.0			4.0			4.0			4.0		
Percent Blockage	1			2			5			9		
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)	801			400								
pX, platoon unblocked	0.49			0.78			0.60	0.60	0.78	0.60	0.60	0.49
vC, conflicting volume	1565			1525			2502	3241	817	2579	3232	855
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1114			1389			1726	2953	479	1854	2937	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	89			85			0	0	70	0	0	88
cM capacity (veh/h)	277			361			0	6	385	0	6	476

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	31	953	512	54	931	520	48	116	113	59
Volume Left	31	0	0	54	0	0	16	0	10	0
Volume Right	0	0	35	0	0	55	0	116	0	59
cSH	277	1700	1700	361	1700	1700	0	385	0	476
Volume to Capacity	0.11	0.56	0.30	0.15	0.55	0.31	Err	0.30	Err	0.12
Queue Length 95th (ft)	9	0	0	13	0	0	Err	31	Err	11
Control Delay (s)	19.6	0.0	0.0	16.7	0.0	0.0	Err	18.3	Err	13.6
Lane LOS	C			C			F	C	F	B
Approach Delay (s)	0.4			0.6			Err		Err	
Approach LOS							F		F	

Intersection Summary

Average Delay	Err	
Intersection Capacity Utilization	83.8%	ICU Level of Service E
Analysis Period (min)	15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↘	↘	↑↑	↘	↘	↑	↘	↘	↑	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.86	1.00	1.00	0.71	1.00	1.00	0.94	1.00	1.00	0.88
Flpb, ped/bikes	0.97	1.00	1.00	0.98	1.00	1.00	0.94	1.00	1.00	0.98	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1270	2608	1002	1281	2608	828	1224	1373	1094	1273	1373	1023
Flt Permitted	0.15	1.00	1.00	0.19	1.00	1.00	0.40	1.00	1.00	0.30	1.00	1.00
Satd. Flow (perm)	201	2608	1002	256	2608	828	516	1373	1094	402	1373	1023
Volume (vph)	38	1105	51	69	1246	75	96	364	104	90	293	67
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	39	1128	52	70	1271	77	98	371	106	92	299	68
RTOR Reduction (vph)	0	0	21	0	0	30	0	0	24	0	0	14
Lane Group Flow (vph)	39	1128	31	70	1271	47	98	371	82	92	299	54
Confl. Peds. (#/hr)	115		91	91		115	110		51	51		110
Confl. Bikes (#/hr)			8			8						5
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		2			6			8				4
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	54.0	54.0	54.0	54.0	54.0	54.0	27.0	27.0	27.0	27.0	27.0	27.0
Effective Green, g (s)	54.5	54.5	54.5	54.5	54.5	54.5	27.5	27.5	27.5	27.5	27.5	27.5
Actuated g/C Ratio	0.61	0.61	0.61	0.61	0.61	0.61	0.31	0.31	0.31	0.31	0.31	0.31
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	122	1579	607	155	1579	501	158	420	334	123	420	313
v/s Ratio Prot		0.43			c0.49			c0.27				0.22
v/s Ratio Perm	0.19		0.03	0.27		0.06	0.19		0.08	0.23		0.05
v/c Ratio	0.32	0.71	0.05	0.45	0.80	0.09	0.62	0.88	0.25	0.75	0.71	0.17
Uniform Delay, d1	8.7	12.3	7.2	9.6	13.7	7.4	26.8	29.7	23.5	28.1	27.7	22.9
Progression Factor	1.21	1.04	2.34	0.70	0.78	0.59	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.8	2.0	0.1	3.6	1.7	0.1	5.3	18.7	0.1	19.3	4.7	0.1
Delay (s)	15.4	14.8	17.0	10.3	12.4	4.5	32.1	48.5	23.6	47.4	32.4	23.0
Level of Service	B	B	B	B	B	A	C	D	C	D	C	C
Approach Delay (s)		14.9			11.8			41.1			34.0	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↕		↕	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00	1.00		0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1662	1417		1654	1417	1583	1661		1583	1661	
Flt Permitted		0.97	1.00		0.92	1.00	0.43	1.00		0.41	1.00	
Satd. Flow (perm)		1618	1417		1536	1417	719	1661		677	1661	
Volume (vph)	13	202	93	43	247	92	54	466	10	20	433	10
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	14	215	99	46	263	98	57	496	11	21	461	11
RTOR Reduction (vph)	0	0	73	0	0	72	0	1	0	0	1	0
Lane Group Flow (vph)	0	229	26	0	309	26	57	506	0	21	471	0
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4		4	2			2		
Actuated Green, G (s)		15.4	15.4		15.4	15.4	35.6	35.6		35.6	35.6	
Effective Green, g (s)		15.9	15.9		15.9	15.9	36.1	36.1		36.1	36.1	
Actuated g/C Ratio		0.27	0.27		0.27	0.27	0.60	0.60		0.60	0.60	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		2.0	2.0		2.0	2.0	0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		429	376		407	376	433	999		407	999	
v/s Ratio Prot							c0.30				0.28	
v/s Ratio Perm		0.14	0.02		c0.20	0.02	0.08			0.03		
v/c Ratio		0.53	0.07		0.76	0.07	0.13	0.51		0.05	0.47	
Uniform Delay, d1		18.9	16.5		20.3	16.5	5.2	6.8		4.9	6.6	
Progression Factor		1.00	1.00		1.00	1.00	1.56	1.59		1.00	1.00	
Incremental Delay, d2		0.6	0.0		7.1	0.0	0.4	1.1		0.2	1.6	
Delay (s)		19.5	16.5		27.4	16.5	8.4	12.0		5.2	8.2	
Level of Service		B	B		C	B	A	B		A	A	
Approach Delay (s)		18.6			24.8			11.6			8.1	
Approach LOS		B			C			B			A	

Intersection Summary

HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘		↗	↗	↗	↗	↗	↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2578		1304	2544		1304	1373	1167	1304	1373	1167
Flt Permitted	0.20	1.00		0.17	1.00		0.37	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	278	2578		240	2544		503	1373	1167	465	1373	1167
Volume (vph)	30	918	75	194	770	151	29	381	186	87	359	108
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	33	1009	82	213	846	166	32	419	204	96	395	119
RTOR Reduction (vph)	0	8	0	0	22	0	0	0	23	0	0	41
Lane Group Flow (vph)	33	1083	0	213	990	0	32	419	181	96	395	78
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases	2			6			8		8	4		4
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	29.6	29.6		29.6	29.6		21.4	21.4	21.4	21.4	21.4	21.4
Effective Green, g (s)	30.1	30.1		30.1	30.1		21.9	21.9	21.9	21.9	21.9	21.9
Actuated g/C Ratio	0.50	0.50		0.50	0.50		0.36	0.36	0.36	0.36	0.36	0.36
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	139	1293		120	1276		184	501	426	170	501	426
v/s Ratio Prot		0.42			0.39			c0.31			0.29	
v/s Ratio Perm	0.12			c0.89			0.06		0.16	0.21		0.07
v/c Ratio	0.24	0.84		1.77	0.78		0.17	0.84	0.43	0.56	0.79	0.18
Uniform Delay, d1	8.5	12.8		14.9	12.2		12.9	17.4	14.3	15.2	17.0	13.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.62	0.70	0.46
Incremental Delay, d2	4.0	6.6		380.3	4.7		0.2	11.1	0.2	2.3	6.8	0.1
Delay (s)	12.4	19.4		395.2	16.9		13.1	28.5	14.6	11.8	18.7	6.1
Level of Service	B	B		F	B		B	C	B	B	B	A
Approach Delay (s)		19.2			82.6			23.4			15.1	
Approach LOS		B			F			C			B	

Intersection Summary

























HCM Average Control Delay	40.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↘	↘	↑↑		↘	↑	↘	↘	↑	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2608	1167	1304	2592		1304	1373	1167	1304	1373	1167
Flt Permitted	0.10	1.00	1.00	0.17	1.00		0.32	1.00	1.00	0.30	1.00	1.00
Satd. Flow (perm)	139	2608	1167	238	2592		432	1373	1167	409	1373	1167
Volume (vph)	58	1093	66	45	1313	54	99	354	138	54	342	38
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	62	1175	71	48	1412	58	106	381	148	58	368	41
RTOR Reduction (vph)	0	0	29	0	2	0	0	0	23	0	0	11
Lane Group Flow (vph)	62	1175	42	48	1468	0	106	381	125	58	368	30
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		Perm
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	53.1	53.1	53.1	53.1	53.1		27.8	27.8	27.8	27.8	27.8	27.8
Effective Green, g (s)	53.7	53.7	53.7	53.7	53.7		28.3	28.3	28.3	28.3	28.3	28.3
Actuated g/C Ratio	0.60	0.60	0.60	0.60	0.60		0.31	0.31	0.31	0.31	0.31	0.31
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	83	1556	696	142	1547		136	432	367	129	432	367
v/s Ratio Prot		0.45			c0.57			c0.28				0.27
v/s Ratio Perm	0.45		0.04	0.20			0.25		0.11	0.14		0.03
v/c Ratio	0.75	0.76	0.06	0.34	0.95		0.78	0.88	0.34	0.45	0.85	0.08
Uniform Delay, d1	13.2	13.3	7.6	9.2	16.9		28.0	29.3	23.7	24.6	28.9	21.7
Progression Factor	1.09	1.17	0.86	1.16	0.97		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	45.3	3.4	0.2	4.3	10.2		22.2	18.2	0.2	0.9	14.4	0.0
Delay (s)	59.7	19.1	6.7	15.0	26.5		50.2	47.4	23.9	25.5	43.3	21.7
Level of Service	E	B	A	B	C		D	D	C	C	D	C
Approach Delay (s)		20.3			26.2			42.4			39.2	
Approach LOS		C			C			D			D	























Intersection Summary

HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	103.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1304	2608	1167	1304	2608	1167	1304	1373	1167	1304	2540	1400
Flt Permitted	0.42	1.00	1.00	0.39	1.00	1.00	0.11	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	576	2608	1167	542	2608	1167	153	1373	1167	153	2540	1400
Volume (vph)	167	520	284	45	480	13	131	1101	58	30	880	184
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	182	565	309	49	522	14	142	1197	63	33	957	200
RTOR Reduction (vph)	0	0	22	0	0	7	0	0	23	0	20	0
Lane Group Flow (vph)	182	565	287	49	522	7	142	1197	40	33	1137	0
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	45.5	45.5	45.5	45.5	45.5	45.5	35.5	35.5	35.5	35.5	35.5	35.5
Effective Green, g (s)	46.0	46.0	46.0	46.0	46.0	46.0	36.0	36.0	36.0	36.0	36.0	36.0
Actuated g/C Ratio	0.51	0.51	0.51	0.51	0.51	0.51	0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	294	1333	596	277	1333	596	61	549	467	61	1016	1400
v/s Ratio Prot		0.22			0.20			0.87			0.45	
v/s Ratio Perm	c0.32		0.25	0.09		0.01	c0.93		0.03	0.22		
v/c Ratio	0.62	0.42	0.48	0.18	0.39	0.01	2.33	2.18	0.08	0.54	1.12	
Uniform Delay, d1	15.7	13.7	14.3	11.8	13.4	10.8	27.0	27.0	16.8	20.7	27.0	
Progression Factor	0.76	0.94	0.86	0.40	0.48	0.27	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.5	0.5	1.3	0.6	0.4	0.0	645.4	537.1	0.0	5.2	67.0	
Delay (s)	16.5	13.3	13.5	5.3	6.8	3.0	672.4	564.1	16.8	25.8	94.0	
Level of Service	B	B	B	A	A	A	F	F	B	C	F	
Approach Delay (s)		13.9			6.6			550.5			92.1	
Approach LOS		B			A			F			F	

Intersection Summary

HCM Average Control Delay	212.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	126.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Fr _t	1.00	0.97		1.00	1.00	0.85	1.00	0.97		1.00	1.00	
Fl _t Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2539		1304	1373	1167	1304	2528		1304	2600	
Fl _t Permitted	0.29	1.00		0.25	1.00	1.00	0.21	1.00		0.15	1.00	
Satd. Flow (perm)	402	2539		342	1373	1167	292	2528		211	2600	
Volume (vph)	14	657	140	196	500	107	104	1004	258	118	856	17
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	15	684	146	204	521	111	108	1046	269	123	892	18
RTOR Reduction (vph)	0	30	0	0	0	24	0	38	0	0	2	0
Lane Group Flow (vph)	15	800	0	204	521	87	108	1277	0	123	908	0
Turn Type	Perm			Perm			Perm	Perm		Perm		
Protected Phases	2			6			8			4		
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	25.5	25.5		25.5	25.5	25.5	25.5	25.5		25.5	25.5	
Effective Green, g (s)	26.0	26.0		26.0	26.0	26.0	26.0	26.0		26.0	26.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43	0.43	0.43	0.43		0.43	0.43	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	174	1100		148	595	506	127	1095		91	1127	
v/s Ratio Prot		0.32			0.38			0.51			0.35	
v/s Ratio Perm	0.04			c0.60		0.07	0.37			c0.58		
v/c Ratio	0.09	0.73		1.38	0.88	0.17	0.85	1.17		1.35	0.81	
Uniform Delay, d ₁	10.0	14.1		17.0	15.5	10.4	15.3	17.0		17.0	14.8	
Progression Factor	0.64	0.49		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d ₂	0.8	3.5		206.8	16.5	0.7	37.7	85.0		214.4	4.0	
Delay (s)	7.2	10.4		223.8	32.0	11.1	53.0	102.0		231.4	18.8	
Level of Service	A	B		F	C	B	D	F		F	B	
Approach Delay (s)		10.3			76.0			98.2			44.1	
Approach LOS		B			E			F			D	
Intersection Summary												
HCM Average Control Delay	62.3			HCM Level of Service				E				
HCM Volume to Capacity ratio	1.36											
Actuated Cycle Length (s)	60.0			Sum of lost time (s)				8.0				
Intersection Capacity Utilization	116.5%			ICU Level of Service				H				
Analysis Period (min)	15											
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷			↷	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	1.00		1.00	0.99		1.00	0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1304	2607		1304	2586		1304	1340			1352	
Flt Permitted	0.10	1.00		0.16	1.00		0.34	1.00			0.67	
Satd. Flow (perm)	144	2607		221	2586		464	1340			916	
Volume (vph)	27	1031	2	56	1147	68	43	377	70	63	398	33
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	29	1109	2	60	1233	73	46	405	75	68	428	35
RTOR Reduction (vph)	0	0	0	0	5	0	0	7	0	0	3	0
Lane Group Flow (vph)	29	1111	0	60	1301	0	46	473	0	0	528	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			8		4
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	45.5	45.5		45.5	45.5		35.5	35.5			35.5	
Effective Green, g (s)	46.0	46.0		46.0	46.0		36.0	36.0			36.0	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.40	0.40			0.40	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5			4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)	74	1332		113	1322		186	536			366	
v/s Ratio Prot		0.43			c0.50			0.35				
v/s Ratio Perm	0.20			0.27			0.10				c0.58	
v/c Ratio	0.39	0.83		0.53	0.98		0.25	0.88			1.44	
Uniform Delay, d1	13.4	18.7		14.8	21.6		18.0	25.0			27.0	
Progression Factor	1.27	1.10		0.91	0.98		1.00	1.00			1.00	
Incremental Delay, d2	14.0	5.9		14.2	19.2		0.3	15.3			214.1	
Delay (s)	31.0	26.5		27.6	40.5		18.2	40.3			241.1	
Level of Service	C	C		C	D		B	D			F	
Approach Delay (s)		26.6			39.9			38.4			241.1	
Approach LOS		C			D			D			F	

Intersection Summary

HCM Average Control Delay	65.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	134.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↗		↖	↗	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1304	2558		1304	1373	1167	1304	1362		1304	1357	
Flt Permitted	0.24	1.00		0.30	1.00	1.00	0.27	1.00		0.33	1.00	
Satd. Flow (perm)	335	2558		411	1373	1167	374	1362		456	1357	
Volume (vph)	25	635	93	50	584	61	81	421	22	97	461	39
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	26	655	96	52	602	63	84	434	23	100	475	40
RTOR Reduction (vph)	0	18	0	0	0	34	0	4	0	0	5	0
Lane Group Flow (vph)	26	733	0	52	602	29	84	453	0	100	510	0
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8			4		
Actuated Green, G (s)	27.2	27.2		27.2	27.2	27.2	23.8	23.8		23.8	23.8	
Effective Green, g (s)	27.7	27.7		27.7	27.7	27.7	24.3	24.3		24.3	24.3	
Actuated g/C Ratio	0.46	0.46		0.46	0.46	0.46	0.41	0.41		0.41	0.41	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	155	1181		190	634	539	151	552		185	550	
v/s Ratio Prot		0.29			c0.44			0.33			c0.38	
v/s Ratio Perm	0.08			0.13		0.02	0.22			0.22		
v/c Ratio	0.17	0.62		0.27	0.95	0.05	0.56	0.82		0.54	0.93	
Uniform Delay, d1	9.4	12.2		10.0	15.5	8.9	13.7	15.9		13.6	17.0	
Progression Factor	1.00	1.00		0.98	0.81	1.32	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.3	2.5		2.1	17.8	0.1	2.5	9.1		1.7	21.4	
Delay (s)	11.8	14.6		11.9	30.3	11.9	16.2	25.0		15.3	38.4	
Level of Service	B	B		B	C	B	B	C		B	D	
Approach Delay (s)		14.5			27.4			23.7			34.7	
Approach LOS		B			C			C			C	

Intersection Summary

HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘	↑	↗	↘	↗	
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frbp, ped/bikes	1.00	1.00	0.48	1.00	0.98		1.00	1.00	0.92	1.00	0.99	
Flpb, ped/bikes	0.94	1.00	1.00	0.86	1.00		0.93	1.00	1.00	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1232	2608	556	1116	2530		1213	1373	1068	1264	1346	
Flt Permitted	0.23	1.00	1.00	0.32	1.00		0.59	1.00	1.00	0.31	1.00	
Satd. Flow (perm)	304	2608	556	371	2530		755	1373	1068	407	1346	
Volume (vph)	10	748	74	167	892	61	197	362	132	41	153	13
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	10	771	76	172	920	63	203	373	136	42	158	13
RTOR Reduction (vph)	0	0	30	0	4	0	0	0	19	0	4	0
Lane Group Flow (vph)	10	771	46	172	979	0	203	373	117	42	167	0
Conf. Peds. (#/hr)	126		228	228		126	86		63	63		86
Conf. Bikes (#/hr)			17			8			10			5
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)	53.4	53.4	53.4	53.4	53.4		27.6	27.6	27.6	27.6	27.6	
Effective Green, g (s)	53.9	53.9	53.9	53.9	53.9		28.1	28.1	28.1	28.1	28.1	
Actuated g/C Ratio	0.60	0.60	0.60	0.60	0.60		0.31	0.31	0.31	0.31	0.31	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	182	1562	333	222	1515		236	429	333	127	420	
v/s Ratio Prot		0.30			0.39			c0.27			0.12	
v/s Ratio Perm	0.03		0.08	c0.46			0.27		0.11	0.10		
v/c Ratio	0.05	0.49	0.14	0.77	0.65		0.86	0.87	0.35	0.33	0.40	
Uniform Delay, d1	7.5	10.3	7.9	13.5	11.8		29.1	29.2	23.9	23.7	24.3	
Progression Factor	0.90	0.65	0.90	0.89	0.96		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	0.9	0.7	7.4	0.6		25.1	16.4	0.2	0.6	0.2	
Delay (s)	7.2	7.6	7.8	19.4	12.0		54.2	45.6	24.1	24.3	24.5	
Level of Service	A	A	A	B	B		D	D	C	C	C	
Approach Delay (s)		7.6			13.1			43.9			24.5	
Approach LOS		A			B			D			C	

Intersection Summary

HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↖		↖	↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes		1.00	0.93		0.99		1.00	0.98		1.00	1.00	0.92
Flpb, ped/bikes		1.00	1.00		0.99		0.97	1.00		0.96	1.00	1.00
Frt		1.00	0.85		0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1648	1312		1588		1533	1580		1526	1667	1298
Flt Permitted		0.93	1.00		0.88		0.45	1.00		0.38	1.00	1.00
Satd. Flow (perm)		1540	1312		1413		723	1580		606	1667	1298
Volume (vph)	22	140	53	107	294	45	31	365	95	14	382	7
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	23	146	55	111	306	47	32	380	99	15	398	7
RTOR Reduction (vph)	0	0	35	0	8	0	0	14	0	0	0	4
Lane Group Flow (vph)	0	169	20	0	456	0	32	465	0	15	398	4
Conf. Peds. (#/hr)	55		60	60		55	40		54	54		40
Conf. Bikes (#/hr)			6						2			3
Turn Type	Perm		Perm	Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)		21.5	21.5		21.5		29.5	29.5		29.5	29.5	29.5
Effective Green, g (s)		22.0	22.0		22.0		30.0	30.0		30.0	30.0	30.0
Actuated g/C Ratio		0.37	0.37		0.37		0.50	0.50		0.50	0.50	0.50
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		565	481		518		362	790		303	834	649
v/s Ratio Prot							c0.29				0.24	
v/s Ratio Perm		0.11	0.02		c0.32		0.04			0.02		0.00
v/c Ratio		0.30	0.04		0.88		0.09	0.59		0.05	0.48	0.01
Uniform Delay, d1		13.5	12.2		17.8		7.8	10.6		7.7	9.9	7.5
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.1	0.0		15.6		0.5	3.2		0.3	2.0	0.0
Delay (s)		13.6	12.2		33.4		8.3	13.8		8.0	11.8	7.5
Level of Service		B	B		C		A	B		A	B	A
Approach Delay (s)		13.3			33.4			13.5			11.6	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↘	↘	↑↑	↘	↘	↑	↘	↘	↑	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.65	1.00	1.00	0.69	1.00	1.00	0.80	1.00	1.00	0.71
Flpb, ped/bikes	0.89	1.00	1.00	0.98	1.00	1.00	0.92	1.00	1.00	0.92	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1161	2608	760	1280	2608	807	1205	1373	931	1197	1373	833
Flt Permitted	0.37	1.00	1.00	0.26	1.00	1.00	0.24	1.00	1.00	0.38	1.00	1.00
Satd. Flow (perm)	458	2608	760	346	2608	807	310	1373	931	476	1373	833
Volume (vph)	29	677	100	127	723	209	77	382	19	94	512	49
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	29	684	101	128	730	211	78	386	19	95	517	49
RTOR Reduction (vph)	0	0	61	0	0	81	0	0	11	0	0	18
Lane Group Flow (vph)	29	684	40	128	730	130	78	386	8	95	517	31
Conf. Peds. (#/hr)	215		346	346		215	205		142	142		205
Conf. Bikes (#/hr)			21			5			5			10
Turn Type	Perm		Perm	pm+pt		Perm	Perm		Perm	Perm		Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	35.1	35.1	35.1	45.1	45.1	45.1	35.9	35.9	35.9	35.9	35.9	35.9
Effective Green, g (s)	35.6	35.6	35.6	45.6	45.6	45.6	36.4	36.4	36.4	36.4	36.4	36.4
Actuated g/C Ratio	0.40	0.40	0.40	0.51	0.51	0.51	0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	181	1032	301	238	1321	409	125	555	377	193	555	337
v/s Ratio Prot		c0.26		0.04	c0.28			0.28			c0.38	
v/s Ratio Perm	0.06		0.05	0.24		0.16	0.25		0.01	0.20		0.04
v/c Ratio	0.16	0.66	0.13	0.54	0.55	0.32	0.62	0.70	0.02	0.49	0.93	0.09
Uniform Delay, d1	17.6	22.3	17.4	13.5	15.2	13.1	21.3	22.2	16.1	19.9	25.6	16.6
Progression Factor	0.86	1.00	1.06	0.96	0.87	0.55	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.8	3.1	0.9	0.9	1.2	1.5	6.8	3.1	0.0	0.7	22.4	0.0
Delay (s)	16.8	25.4	19.2	13.9	14.4	8.7	28.1	25.3	16.1	20.6	48.0	16.6
Level of Service	B	C	B	B	B	A	C	C	B	C	D	B
Approach Delay (s)		24.3			13.2			25.4			41.7	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↗	↖	↗	↗	↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00	1.00	1.00	0.95	
Frbp, ped/bikes		0.86			0.98		1.00	1.00	0.69	1.00	0.97	
Flpb, ped/bikes		0.99			0.97		0.91	1.00	1.00	0.89	1.00	
Frt		0.93			0.98		1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00			0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1317			1534		1444	1667	977	1402	3046	
Flt Permitted		0.96			0.82		0.25	1.00	1.00	0.34	1.00	
Satd. Flow (perm)		1266			1278		377	1667	977	501	3046	
Volume (vph)	28	156	202	92	230	48	75	444	65	60	726	57
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	30	166	215	98	245	51	80	472	69	64	772	61
RTOR Reduction (vph)	0	16	0	0	9	0	0	0	39	0	10	0
Lane Group Flow (vph)	0	395	0	0	385	0	80	472	30	64	823	0
Conf. Peds. (#/hr)	164		246	246		164	191		157	157		191
Conf. Bikes (#/hr)			11			14			3			4
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		2			6			8				4
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		25.5			25.5		25.5	25.5	25.5	25.5	25.5	25.5
Effective Green, g (s)		26.0			26.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio		0.43			0.43		0.43	0.43	0.43	0.43	0.43	0.43
Clearance Time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)		549			554		163	722	423	217	1320	
v/s Ratio Prot							c0.28				0.27	
v/s Ratio Perm		c0.31			0.30		0.21		0.03	0.13		
v/c Ratio		0.72			0.69		0.49	0.65	0.07	0.29	0.62	
Uniform Delay, d1		14.0			13.8		12.2	13.4	9.9	11.0	13.2	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		7.9			7.0		10.2	4.6	0.3	3.4	2.2	
Delay (s)		21.9			20.8		22.4	18.0	10.3	14.5	15.4	
Level of Service		C			C		C	B	B	B	B	
Approach Delay (s)		21.9			20.8			17.7			15.4	
Approach LOS		C			C			B			B	
Intersection Summary												
HCM Average Control Delay			18.1				HCM Level of Service			B		
HCM Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			60.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			91.4%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↑	↗	↘	↑	↗	↘	↑↕	↘
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected		1.00	1.00		1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1373	1167		1373	1167	1304	1373	1167	1304	2529	
Flt Permitted		1.00	1.00		1.00	1.00	0.13	1.00	1.00	0.13	1.00	
Satd. Flow (perm)		1373	1167		1373	1167	177	1373	1167	177	2529	
Volume (vph)	0	339	118	0	260	84	69	535	76	102	787	198
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	0	390	136	0	299	97	79	615	87	117	905	228
RTOR Reduction (vph)	0	0	102	0	0	73	0	0	55	0	26	0
Lane Group Flow (vph)	0	390	34	0	299	24	79	615	32	117	1107	0
Turn Type		Perm			Perm		Perm		Perm		Perm	
Protected Phases		2			6			8			4	
Permitted Phases		2			6		8		8		4	
Actuated Green, G (s)		20.5	20.5		20.5	20.5	30.5	30.5	30.5	30.5	30.5	
Effective Green, g (s)		21.0	21.0		21.0	21.0	31.0	31.0	31.0	31.0	31.0	
Actuated g/C Ratio		0.25	0.25		0.25	0.25	0.36	0.36	0.36	0.36	0.36	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)		339	288		339	288	65	501	426	65	922	
v/s Ratio Prot		c0.28			c0.22			0.45			0.44	
v/s Ratio Perm		0.03			0.02		0.45		0.03		c0.66	
v/c Ratio		1.15	0.12		0.88	0.08	1.22	1.23	0.07	1.80	1.20	
Uniform Delay, d1		32.0	24.8		30.8	24.6	27.0	27.0	17.6	27.0	27.0	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		96.3	0.8		26.5	0.6	180.7	119.1	0.3	414.2	100.7	
Delay (s)		128.3	25.6		57.3	25.2	207.7	146.1	18.0	441.2	127.7	
Level of Service		F	C		E	C	F	F	B	F	F	
Approach Delay (s)		101.7			49.4			138.0			157.1	
Approach LOS		F			D			F			F	

Intersection Summary

HCM Average Control Delay	127.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
181: Wilshire Blvd & 3rd St



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗↗	↖↗		↖	↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.92		1.00	0.79
Flpb, ped/bikes	0.93	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.96		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1214	2608	2288		1304	920
Flt Permitted	0.28	1.00	1.00		0.95	1.00
Satd. Flow (perm)	362	2608	2288		1304	920
Volume (vph)	48	647	625	239	132	76
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	52	696	672	257	142	82
RTOR Reduction (vph)	0	0	25	0	0	67
Lane Group Flow (vph)	52	696	904	0	142	15
Conf. Peds. (#/hr)	122			122	475	186
Conf. Bikes (#/hr)				7		3
Turn Type	Perm				Perm	
Protected Phases		2	6		4	
Permitted Phases	2					4
Actuated Green, G (s)	64.9	64.9	64.9		16.1	16.1
Effective Green, g (s)	65.4	65.4	65.4		16.6	16.6
Actuated g/C Ratio	0.73	0.73	0.73		0.18	0.18
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	263	1895	1663		241	170
v/s Ratio Prot		0.27	c0.40		c0.11	
v/s Ratio Perm	0.14					0.02
v/c Ratio	0.20	0.37	0.54		0.59	0.09
Uniform Delay, d1	3.9	4.6	5.6		33.6	30.4
Progression Factor	1.45	1.40	0.88		1.00	1.00
Incremental Delay, d2	1.6	0.5	1.1		2.4	0.1
Delay (s)	7.4	7.0	6.0		35.9	30.5
Level of Service	A	A	A		D	C
Approach Delay (s)		7.0	6.0		34.0	
Approach LOS		A	A		C	

Intersection Summary

HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘		↖	↗	↘	↕	↗	↘	↗	↘
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1583	1667	1417		1657	1417	1583	1667	1417	1583	1667	1417
Flt Permitted	0.22	1.00	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	364	1667	1417		1590	1417	1583	1667	1417	1583	1667	1417
Volume (vph)	69	97	161	39	305	60	393	769	48	24	695	127
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	73	103	171	41	324	64	418	818	51	26	739	135
RTOR Reduction (vph)	0	0	53	0	0	51	0	0	18	0	0	76
Lane Group Flow (vph)	73	103	118	0	365	13	418	818	33	26	739	59
Turn Type	Perm		pm+ov	Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases		2	3		6		3	8		7		4
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	17.8	17.8	38.3		17.8	17.8	20.5	57.1	57.1	1.6	38.2	38.2
Effective Green, g (s)	18.3	18.3	39.3		18.3	18.3	21.0	57.6	57.6	2.1	38.7	38.7
Actuated g/C Ratio	0.20	0.20	0.44		0.20	0.20	0.23	0.64	0.64	0.02	0.43	0.43
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	1.0	3.0	3.0
Lane Grp Cap (vph)	74	339	682		323	288	369	1067	907	37	717	609
v/s Ratio Prot		0.06	0.04				c0.26	0.49		0.02	c0.44	
v/s Ratio Perm	0.20		0.04		c0.23	0.01			0.02			0.04
v/c Ratio	0.99	0.30	0.17		1.13	0.05	1.13	0.77	0.04	0.70	1.03	0.10
Uniform Delay, d1	35.7	30.4	15.4		35.9	28.8	34.5	11.4	6.0	43.6	25.6	15.3
Progression Factor	1.00	1.00	1.00		1.00	1.00	0.96	1.35	2.52	1.00	1.00	1.00
Incremental Delay, d2	100.9	2.3	0.1		90.0	0.3	83.0	2.6	0.0	39.1	41.7	0.1
Delay (s)	136.6	32.7	15.6		125.9	29.1	116.1	18.1	15.1	82.8	67.4	15.3
Level of Service	F	C	B		F	C	F	B	B	F	E	B
Approach Delay (s)		46.1			111.4			49.8			60.0	
Approach LOS		D			F			D			E	

Intersection Summary

HCM Average Control Delay	61.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	2530	1167	2608	1167	1304	2608
Flt Permitted	0.95	1.00	1.00	1.00	0.22	1.00
Satd. Flow (perm)	2530	1167	2608	1167	302	2608
Volume (vph)	261	256	965	167	169	778
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	272	267	1005	174	176	810
RTOR Reduction (vph)	0	166	0	64	0	0
Lane Group Flow (vph)	272	101	1005	110	176	810
Turn Type		Perm		Perm	pm+pt	
Protected Phases	6		8		7	4
Permitted Phases		6		8		4
Actuated Green, G (s)	14.7	14.7	56.3	56.3	66.3	66.3
Effective Green, g (s)	15.2	15.2	56.8	56.8	66.8	66.8
Actuated g/C Ratio	0.17	0.17	0.63	0.63	0.74	0.74
Clearance Time (s)	4.5	4.5	4.5	4.5	3.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	1.0	3.0
Lane Grp Cap (vph)	427	197	1646	737	291	1936
v/s Ratio Prot	c0.11		0.39		c0.04	0.31
v/s Ratio Perm		0.09		0.09	c0.41	
v/c Ratio	0.64	0.51	0.61	0.15	0.60	0.42
Uniform Delay, d1	34.8	34.0	10.0	6.8	5.4	4.3
Progression Factor	1.22	1.92	1.00	1.00	3.34	0.25
Incremental Delay, d2	2.7	1.9	1.7	0.4	1.0	0.3
Delay (s)	45.0	67.2	11.7	7.2	19.0	1.3
Level of Service	D	E	B	A	B	A
Approach Delay (s)	56.0		11.0			4.5
Approach LOS	E		B			A

Intersection Summary

HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1304	1167	2608	1167	1304	2608
Flt Permitted	0.95	1.00	1.00	1.00	0.23	1.00
Satd. Flow (perm)	1304	1167	2608	1167	321	2608
Volume (vph)	196	67	912	231	59	1070
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	202	69	940	238	61	1103
RTOR Reduction (vph)	0	51	0	94	0	0
Lane Group Flow (vph)	202	18	940	144	61	1103
Turn Type	pm+ov		Perm pm+pt			
Protected Phases	6	7	8		7	4
Permitted Phases		6		8	4	
Actuated Green, G (s)	18.4	22.7	53.8	53.8	62.6	62.6
Effective Green, g (s)	18.9	23.7	54.3	54.3	63.1	63.1
Actuated g/C Ratio	0.21	0.26	0.60	0.60	0.70	0.70
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	274	359	1573	704	277	1828
v/s Ratio Prot	c0.15	0.00	0.36		0.01	c0.42
v/s Ratio Perm		0.01		0.12	0.14	
v/c Ratio	0.74	0.05	0.60	0.20	0.22	0.60
Uniform Delay, d1	33.2	24.8	11.1	8.1	5.4	7.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.6	0.0	1.7	0.7	0.1	1.5
Delay (s)	41.8	24.8	12.8	8.7	5.6	8.5
Level of Service	D	C	B	A	A	A
Approach Delay (s)	37.5		11.9			8.3
Approach LOS	D		B			A

Intersection Summary

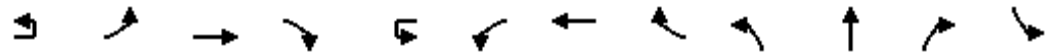
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1583	1662		1583	1661			1644			1617	
Flt Permitted	0.15	1.00		0.15	1.00			0.61			0.98	
Satd. Flow (perm)	256	1662		256	1661			1015			1593	
Volume (vph)	155	639	10	118	729	9	113	524	18	17	732	150
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	161	666	10	123	759	9	118	546	19	18	762	156
RTOR Reduction (vph)	0	1	0	0	1	0	0	2	0	0	12	0
Lane Group Flow (vph)	161	675	0	123	767	0	0	681	0	0	924	0
Conf. Peds. (#/hr)	66		13	13		66	21		26	26		21
Conf. Bikes (#/hr)			27			8						6
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			26.0			26.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			26.0			26.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.43			0.43	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	111	720		111	720			440			690	
v/s Ratio Prot		0.41			0.46							
v/s Ratio Perm	c0.63			0.48				c0.67			0.58	
v/c Ratio	1.45	0.94		1.11	1.07			1.55			1.34	
Uniform Delay, d1	17.0	16.2		17.0	17.0			17.0			17.0	
Progression Factor	1.00	1.00		1.02	1.03			1.96			1.00	
Incremental Delay, d2	245.8	21.3		83.1	40.2			255.3			162.4	
Delay (s)	262.8	37.5		100.4	57.7			288.6			179.4	
Level of Service	F	D		F	E			F			F	
Approach Delay (s)		80.8			63.6			288.6			179.4	
Approach LOS		F			E			F			F	

Intersection Summary

HCM Average Control Delay	146.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.50		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	160.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔	↑↑↑	↗		↔	↑↑↑	↗	↖	↖		↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		1.00	0.91	1.00		1.00	0.91	1.00	1.00	1.00		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.95		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1583	4550	1417		1583	4550	1417	1583	1584		1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.12	1.00		0.20
Satd. Flow (perm)		1583	4550	1417		1583	4550	1417	194	1584		328
Volume (vph)	31	176	1914	45	14	82	2364	200	87	262	130	365
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	31	178	1933	45	14	83	2388	202	88	265	131	369
RTOR Reduction (vph)	0	0	0	19	0	0	0	76	0	15	0	0
Lane Group Flow (vph)	0	209	1933	26	0	97	2388	126	88	381	0	369
Turn Type	Prot	Prot		Perm	Prot	Prot		pm+ov	pm+pt			pm+pt
Protected Phases	1	1	6		5	5	2	7	3	8		7
Permitted Phases				6				2	8			4
Actuated Green, G (s)		18.1	44.0	44.0		12.6	38.5	50.5	40.5	32.4		48.3
Effective Green, g (s)		18.1	45.0	45.0		12.6	39.5	51.5	42.5	34.4		50.3
Actuated g/C Ratio		0.15	0.38	0.38		0.10	0.33	0.43	0.35	0.29		0.42
Clearance Time (s)		4.0	5.0	5.0		4.0	5.0	4.0	4.0	6.0		4.0
Vehicle Extension (s)		3.0	4.4	4.4		3.0	4.3	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		239	1706	531		166	1498	655	162	454		263
v/s Ratio Prot		c0.13	0.42			0.06	c0.52	0.02	0.04	0.24		c0.14
v/s Ratio Perm				0.02				0.07	0.16			c0.45
v/c Ratio		0.87	1.13	0.05		0.58	1.59	0.19	0.54	0.84		1.40
Uniform Delay, d1		49.8	37.5	23.9		51.2	40.2	21.3	29.9	40.2		30.5
Progression Factor		1.00	1.00	1.00		0.80	1.72	3.58	1.00	1.00		1.04
Incremental Delay, d2		27.8	67.8	0.2		0.5	267.6	0.0	3.7	12.8		183.5
Delay (s)		77.7	105.3	24.1		41.6	336.9	76.3	33.6	53.0		215.3
Level of Service		E	F	C		D	F	E	C	D		F
Approach Delay (s)			101.0				306.6			49.5		
Approach LOS			F				F			D		

Intersection Summary

HCM Average Control Delay	188.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	124.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations	↱	
Ideal Flow (vphpl)	1700	1700
Total Lost time (s)	4.0	
Lane Util. Factor	1.00	
Frt	0.99	
Flt Protected	1.00	
Satd. Flow (prot)	1643	
Flt Permitted	1.00	
Satd. Flow (perm)	1643	
Volume (vph)	485	50
Peak-hour factor, PHF	0.99	0.99
Adj. Flow (vph)	490	51
RTOR Reduction (vph)	3	0
Lane Group Flow (vph)	538	0
Turn Type		
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	36.3	
Effective Green, g (s)	38.3	
Actuated g/C Ratio	0.32	
Clearance Time (s)	6.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	524	
v/s Ratio Prot	0.33	
v/s Ratio Perm		
v/c Ratio	1.03	
Uniform Delay, d1	40.9	
Progression Factor	1.03	
Incremental Delay, d2	19.1	
Delay (s)	61.3	
Level of Service	E	
Approach Delay (s)	123.7	
Approach LOS	F	

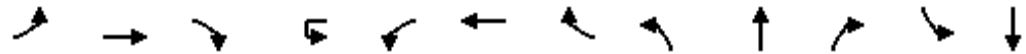
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔		↔	↕		↔	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	1650		1566	1650		1583	3025		1583	3017	
Flt Permitted	0.16	1.00		0.30	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	267	1650		498	1650		185	3025		185	3017	
Volume (vph)	335	516	26	247	690	36	126	1193	320	9	1200	286
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	342	527	27	252	704	37	129	1217	327	9	1224	292
RTOR Reduction (vph)	0	2	0	0	2	0	0	27	0	0	23	0
Lane Group Flow (vph)	342	552	0	252	739	0	129	1517	0	9	1493	0
Conf. Peds. (#/hr)	29		30	30		29	48		28	28		48
Conf. Bikes (#/hr)			26			9			4			2
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	45.0	45.0		45.0	45.0		35.1	35.1		35.1	35.1	
Effective Green, g (s)	46.0	46.0		46.0	46.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.40	0.40		0.40	0.40	
Clearance Time (s)	5.0	5.0		5.0	5.0		4.9	4.9		4.9	4.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	136	843		255	843		74	1210		74	1207	
v/s Ratio Prot		0.33			0.45			0.50			0.49	
v/s Ratio Perm	c1.28			0.51			c0.70			0.05		
v/c Ratio	2.51	0.65		0.99	0.88		1.74	1.25		0.12	1.24	
Uniform Delay, d1	22.0	16.2		21.7	19.5		27.0	27.0		17.0	27.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	702.9	4.0		53.4	12.4		384.1	121.1		3.3	114.0	
Delay (s)	724.9	20.1		75.2	31.9		411.1	148.1		20.4	141.0	
Level of Service	F	C		E	C		F	F		C	F	
Approach Delay (s)		289.1			42.9			168.4			140.3	
Approach LOS		F			D			F			F	

Intersection Summary

HCM Average Control Delay	156.7	HCM Level of Service	F
HCM Volume to Capacity ratio	2.17		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	134.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗		↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1583	4550	1417		1583	4550	1417	1583	3167	1417	1583	3167
Flt Permitted	0.95	1.00	1.00		0.95	1.00	1.00	0.11	1.00	1.00	0.11	1.00
Satd. Flow (perm)	1583	4550	1417		1583	4550	1417	180	3167	1417	180	3167
Volume (vph)	262	1466	290	30	46	1819	229	174	994	184	152	1197
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	279	1560	309	32	49	1935	244	185	1057	196	162	1273
RTOR Reduction (vph)	0	0	110	0	0	0	125	0	0	127	0	0
Lane Group Flow (vph)	279	1560	199	0	81	1935	119	185	1057	69	162	1273
Turn Type	Prot	pm+ov		Prot	Prot	Perm pm+pt		Perm pm+pt		Perm pm+pt		
Protected Phases	1	6	3	5	5	2	3		8	8		4
Permitted Phases	6			2				8		8		4
Actuated Green, G (s)	18.8	36.4	45.4		9.3	26.9	26.9	43.8	34.8	34.8	43.8	34.8
Effective Green, g (s)	18.8	37.7	47.7		9.3	28.2	28.2	47.0	37.0	37.0	47.0	37.0
Actuated g/C Ratio	0.17	0.34	0.43		0.08	0.26	0.26	0.43	0.34	0.34	0.43	0.34
Clearance Time (s)	4.0	5.3	5.0		4.0	5.3	5.3	5.0	6.2	6.2	5.0	6.2
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	4.2	4.2	3.0	3.6
Lane Grp Cap (vph)	271	1559	666		134	1166	363	204	1065	477	204	1065
v/s Ratio Prot	0.18	c0.34	0.03		0.05	c0.43		c0.08	0.33		0.07	c0.40
v/s Ratio Perm			0.11				0.08	0.30		0.05	0.27	
v/c Ratio	1.03	1.00	0.30		0.60	1.66	0.33	0.91	0.99	0.15	0.79	1.20
Uniform Delay, d1	45.6	36.1	20.3		48.6	40.9	33.2	51.5	36.4	25.5	24.8	36.5
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	62.5	22.9	0.3		7.5	300.6	2.4	37.9	25.7	0.2	18.8	97.2
Delay (s)	108.1	59.1	20.5		56.1	341.5	35.6	89.4	62.0	25.7	43.6	133.7
Level of Service	F	E	C		E	F	D	F	E	C	D	F
Approach Delay (s)		59.9			298.3			60.6			112.5	
Approach LOS		E			F			E			F	

Intersection Summary

HCM Average Control Delay	143.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	116.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	7
Ideal Flow (vphpl)	1700
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1417
Flt Permitted	1.00
Satd. Flow (perm)	1417
Volume (vph)	152
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	162
RTOR Reduction (vph)	23
Lane Group Flow (vph)	139
Turn Type	pm+ov
Protected Phases	1
Permitted Phases	4
Actuated Green, G (s)	53.6
Effective Green, g (s)	55.8
Actuated g/C Ratio	0.51
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	719
v/s Ratio Prot	0.03
v/s Ratio Perm	0.07
v/c Ratio	0.19
Uniform Delay, d1	14.8
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	14.9
Level of Service	B
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑			↑↑↑	↔	↔	↔↔↔	↔			
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.91			0.86	1.00	0.86	0.81	0.86			
Frt	1.00	1.00			1.00	0.85	1.00	0.97	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3072	4550			5733	1417	1362	3893	1218			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3072	4550			5733	1417	1362	3893	1218			
Volume (vph)	733	1721	0	0	1457	686	782	968	786	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	788	1851	0	0	1567	738	841	1041	845	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	8	0	9	9	0	0	0
Lane Group Flow (vph)	788	1851	0	0	1567	730	551	1659	499	0	0	0
Turn Type	Prot				Perm		Split	Perm				
Protected Phases	1	6			2		4	4				
Permitted Phases					2						4	
Actuated Green, G (s)	21.0	69.0			44.0	44.0	40.2	40.2	40.2			
Effective Green, g (s)	21.0	70.0			45.0	45.0	42.0	42.0	42.0			
Actuated g/C Ratio	0.18	0.58			0.38	0.38	0.35	0.35	0.35			
Clearance Time (s)	4.0	5.0			5.0	5.0	5.8	5.8	5.8			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	538	2654			2150	531	477	1363	426			
v/s Ratio Prot	c0.26	0.41			0.27		0.40	c0.43				
v/s Ratio Perm					c0.52						0.41	
v/c Ratio	1.46	0.70			0.73	1.37	1.16	1.22	1.17			
Uniform Delay, d1	49.5	17.6			32.3	37.5	39.0	39.0	39.0			
Progression Factor	1.05	1.44			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	215.5	1.0			2.2	180.2	91.3	104.6	99.4			
Delay (s)	267.5	26.2			34.5	217.7	130.3	143.6	138.4			
Level of Service	F	C			C	F	F	F	F			
Approach Delay (s)	98.3				93.1		139.9				0.0	
Approach LOS	F				F		F				A	

Intersection Summary

HCM Average Control Delay	111.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑		↔↔	↑↑↑					↔	↔↔	↔
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.81		0.97	0.91					0.91	0.86	0.91
Frt		0.98		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		6601		3072	4550					1441	2812	1289
Flt Permitted		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (perm)		6601		3072	4550					1441	2812	1289
Volume (vph)	0	1770	305	636	1782	0	0	0	0	505	370	279
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	1844	318	662	1856	0	0	0	0	526	385	291
RTOR Reduction (vph)	0	25	0	0	0	0	0	0	0	0	1	14
Lane Group Flow (vph)	0	2137	0	662	1856	0	0	0	0	304	612	271
Turn Type				Prot						Split		Perm
Protected Phases		2		1	6					4	4	
Permitted Phases												4
Actuated Green, G (s)		43.6		29.8	77.9					32.4	32.4	32.4
Effective Green, g (s)		44.3		30.3	78.6					33.4	33.4	33.4
Actuated g/C Ratio		0.37		0.25	0.65					0.28	0.28	0.28
Clearance Time (s)		4.7		4.5	4.7					5.0	5.0	5.0
Vehicle Extension (s)		3.0		4.0	3.0					4.0	4.0	4.0
Lane Grp Cap (vph)		2437		776	2980					401	783	359
v/s Ratio Prot		c0.32		c0.22	0.41					0.21	c0.22	
v/s Ratio Perm												0.21
v/c Ratio		0.88		0.85	0.62					0.76	0.78	0.75
Uniform Delay, d1		35.3		42.7	12.1					39.6	39.9	39.5
Progression Factor		1.00		0.54	1.46					1.00	1.00	1.00
Incremental Delay, d2		4.8		5.0	0.5					8.5	5.4	9.2
Delay (s)		40.2		27.9	18.1					48.1	45.3	48.7
Level of Service		D		C	B					D	D	D
Approach Delay (s)		40.2			20.7			0.0			46.8	
Approach LOS		D			C			A			D	
Intersection Summary												
HCM Average Control Delay			33.2			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			114.7%			ICU Level of Service				H		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	0.97		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	
Frt	1.00	0.95		1.00	1.00			0.95			0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.97			1.00	
Satd. Flow (prot)	1576	1544		1583	1664			1520			1631	
Flt Permitted	0.20	1.00		0.16	1.00			0.61			0.92	
Satd. Flow (perm)	334	1544		267	1664			953			1514	
Volume (vph)	16	610	264	423	559	5	440	120	291	30	295	31
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	17	649	281	450	595	5	468	128	310	32	314	33
RTOR Reduction (vph)	0	26	0	0	1	0	0	31	0	0	6	0
Lane Group Flow (vph)	17	904	0	450	599	0	0	875	0	0	374	0
Conf. Peds. (#/hr)	10		27	27		10	17		16	16		17
Conf. Bikes (#/hr)			30			16			3			10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	25.0	25.0		25.0	25.0			27.0			27.0	
Effective Green, g (s)	25.0	25.0		25.0	25.0			27.0			27.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	139	643		111	693			429			681	
v/s Ratio Prot		0.59			0.36							
v/s Ratio Perm	0.05			c1.69				c0.92			0.25	
v/c Ratio	0.12	1.41		4.05	0.86			2.04			0.55	
Uniform Delay, d1	10.8	17.5		17.5	16.0			16.5			12.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.8	191.7		1395.5	13.6			475.6			0.9	
Delay (s)	12.6	209.2		1413.0	29.6			492.1			13.0	
Level of Service	B	F		F	C			F			B	
Approach Delay (s)		205.7			622.5			492.1			13.0	
Approach LOS		F			F			F			B	

Intersection Summary

HCM Average Control Delay	395.8	HCM Level of Service	F
HCM Volume to Capacity ratio	3.00		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	170.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	4524		1583	4505		1583	1618		1583	1586	
Flt Permitted	0.08	1.00		0.08	1.00		0.10	1.00		0.47	1.00	
Satd. Flow (perm)	126	4524		126	4505		166	1618		792	1586	
Volume (vph)	111	1628	64	40	1580	110	42	206	50	87	397	190
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	116	1696	67	42	1646	115	44	215	52	91	414	198
RTOR Reduction (vph)	0	4	0	0	7	0	0	8	0	0	13	0
Lane Group Flow (vph)	116	1759	0	42	1754	0	44	260	0	91	600	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		2		2		4		4		4	
Permitted Phases	2		2		2		4		4		4	
Actuated Green, G (s)	66.6	66.6		66.6	66.6		44.0	44.0		44.0	44.0	
Effective Green, g (s)	67.0	67.0		67.0	67.0		45.0	45.0		45.0	45.0	
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.38	0.38		0.38	0.38	
Clearance Time (s)	4.4	4.4		4.4	4.4		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	70	2526		70	2515		62	607		297	595	
v/s Ratio Prot		0.39			0.39			0.16			c0.38	
v/s Ratio Perm	c0.92			0.33			0.26			0.11		
v/c Ratio	1.66	0.70		0.60	0.70		0.71	0.43		0.31	1.01	
Uniform Delay, d1	26.5	19.2		17.6	19.2		31.9	27.9		26.5	37.5	
Progression Factor	0.99	0.93		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	301.4	0.1		32.6	1.6		31.0	0.5		0.6	38.8	
Delay (s)	327.6	17.9		50.2	20.8		62.9	28.4		27.1	76.3	
Level of Service	F	B		D	C		E	C		C	E	
Approach Delay (s)		37.0			21.5			33.3			69.9	
Approach LOS		D			C			C			E	

Intersection Summary

HCM Average Control Delay	35.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	103.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑	↗	↖↗	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1583	4550	3167	1417	3072	1417
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1583	4550	3167	1417	3072	1417
Volume (vph)	357	1361	1328	728	831	362
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	376	1433	1398	766	875	381
RTOR Reduction (vph)	0	0	0	6	0	5
Lane Group Flow (vph)	376	1433	1398	760	875	376
Turn Type	Prot		pm+ov		pt+ov	
Protected Phases	5	2	6	4	4	4 5
Permitted Phases				6		
Actuated Green, G (s)	12.5	40.6	37.1	66.5	29.4	45.5
Effective Green, g (s)	12.0	40.5	37.0	66.0	29.0	45.0
Actuated g/C Ratio	0.13	0.45	0.41	0.73	0.32	0.50
Clearance Time (s)	3.5	3.9	3.9	3.6	3.6	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	211	2048	1302	1102	990	709
v/s Ratio Prot	c0.24	c0.31	c0.44	0.22	c0.28	0.27
v/s Ratio Perm				0.31		
v/c Ratio	1.78	0.70	1.07	0.69	0.88	0.53
Uniform Delay, d1	39.0	19.9	26.5	6.5	28.9	15.3
Progression Factor	1.00	1.00	0.62	0.35	1.00	1.00
Incremental Delay, d2	370.4	2.0	34.9	0.2	9.5	0.8
Delay (s)	409.4	21.9	51.3	2.4	38.4	16.1
Level of Service	F	C	D	A	D	B
Approach Delay (s)		102.4	34.0		31.6	
Approach LOS		F	C		C	

Intersection Summary

HCM Average Control Delay	57.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	99.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.92	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3010		1509	3018	1430	
Flt Permitted	1.00		0.14	1.00	0.98	
Satd. Flow (perm)	3010		216	3018	1430	
Volume (vph)	1488	27	48	1398	26	41
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1534	28	49	1441	27	42
RTOR Reduction (vph)	1	0	0	0	37	0
Lane Group Flow (vph)	1561	0	49	1441	32	0
Turn Type			Perm			
Protected Phases	2			6	4	
Permitted Phases			6			
Actuated Green, G (s)	80.3		80.3	80.3	11.7	
Effective Green, g (s)	79.8		79.8	79.8	12.2	
Actuated g/C Ratio	0.80		0.80	0.80	0.12	
Clearance Time (s)	3.5		3.5	3.5	4.5	
Vehicle Extension (s)	0.2		0.2	0.2	3.0	
Lane Grp Cap (vph)	2402		172	2408	174	
v/s Ratio Prot	c0.52			0.48	c0.02	
v/s Ratio Perm			0.23			
v/c Ratio	0.65		0.28	0.60	0.18	
Uniform Delay, d1	4.2		2.6	3.9	39.4	
Progression Factor	1.15		0.13	0.14	1.00	
Incremental Delay, d2	0.1		3.3	0.9	0.5	
Delay (s)	5.0		3.6	1.4	39.9	
Level of Service	A		A	A	D	
Approach Delay (s)	5.0			1.5	39.9	
Approach LOS	A			A	D	
Intersection Summary						
HCM Average Control Delay			4.1		HCM Level of Service	A
HCM Volume to Capacity ratio			0.59			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			63.4%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						



Movement	EBL	EBT	EBR	EBR2	NBT	NBR	NBR2	SBL2	SBL	SBT	NWR2
Lane Configurations											
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0					4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95					0.95	1.00
Frt	1.00	1.00	0.85	0.85	0.94					1.00	0.86
Flt Protected	0.95	1.00	1.00	1.00	1.00					0.98	1.00
Satd. Flow (prot)	1583	3167	1417	1417	2978					3096	1442
Flt Permitted	0.95	1.00	1.00	1.00	1.00					0.67	1.00
Satd. Flow (perm)	1583	3167	1417	1417	2978					2111	1442
Volume (vph)	68	1761	309	42	357	125	110	151	115	320	51
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	1957	343	47	397	139	122	168	128	356	57
RTOR Reduction (vph)	0	0	0	45	19	0	0	0	0	0	0
Lane Group Flow (vph)	76	1957	343	2	639	0	0	0	0	652	57
Turn Type	custom		Perm	Perm					Prot		Free
Protected Phases	3	3			6				2	1	
Permitted Phases	4	4	3	3						2	Free
Actuated Green, G (s)	25.0	25.0	5.0	5.0	22.5					34.9	100.0
Effective Green, g (s)	23.6	23.6	4.0	4.0	22.5					33.9	100.0
Actuated g/C Ratio	0.24	0.24	0.04	0.04	0.22					0.34	1.00
Clearance Time (s)	3.0	3.0	3.0	3.0	4.0					4.0	
Vehicle Extension (s)	1.0	1.0	1.0	1.0	3.0					4.0	
Lane Grp Cap (vph)	437	874	57	57	670					913	1442
v/s Ratio Prot	0.01	c0.09			c0.21					c0.14	
v/s Ratio Perm	0.04	0.53	c0.24	0.00						c0.10	0.04
v/c Ratio	0.17	2.24	6.02	0.03	0.95					0.71	0.04
Uniform Delay, d1	30.7	38.2	48.0	46.1	38.2					28.8	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00					0.32	1.00
Incremental Delay, d2	0.1	561.3	2295.2	0.1	25.0					3.8	0.1
Delay (s)	30.7	599.5	2343.2	46.2	63.2					12.9	0.1
Level of Service	C	F	F	D	E					B	A
Approach Delay (s)		817.8			63.2					12.9	
Approach LOS		F			E					B	

Intersection Summary

HCM Average Control Delay	536.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	102.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↗	↕			↕	↗		↕	↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frbp, ped/bikes	1.00	0.99		1.00	0.99			1.00	0.96		1.00	0.97
Flpb, ped/bikes	0.98	1.00		0.98	1.00			0.99	1.00		0.99	1.00
Frt	1.00	0.99		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.98	1.00
Satd. Flow (prot)	1273	2539		1284	2553			1337	1120		1341	1127
Flt Permitted	0.19	1.00		0.15	1.00			0.88	1.00		0.91	1.00
Satd. Flow (perm)	255	2539		199	2553			1203	1120		1241	1127
Volume (vph)	19	1103	93	62	981	63	33	52	71	15	31	44
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	22	1283	108	72	1141	73	38	60	83	17	36	51
RTOR Reduction (vph)	0	4	0	0	3	0	0	0	19	0	0	28
Lane Group Flow (vph)	22	1387	0	72	1211	0	0	98	64	0	53	23
Conf. Peds. (#/hr)	77		74	74		77	20		26	26		20
Conf. Bikes (#/hr)						1			3			2
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	62.0	62.0		62.0	62.0			19.0	19.0		19.0	19.0
Effective Green, g (s)	62.5	62.5		62.5	62.5			19.5	19.5		19.5	19.5
Actuated g/C Ratio	0.69	0.69		0.69	0.69			0.22	0.22		0.22	0.22
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5	4.5		4.5	4.5
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	177	1763		138	1773			261	243		269	244
v/s Ratio Prot		c0.55			0.47							
v/s Ratio Perm	0.09			0.36				c0.08	0.06		0.04	0.02
v/c Ratio	0.12	0.79		0.52	0.68			0.38	0.26		0.20	0.09
Uniform Delay, d1	4.6	9.3		6.6	8.0			30.1	29.3		28.8	28.2
Progression Factor	0.50	0.56		1.78	1.86			1.00	1.00		1.00	1.00
Incremental Delay, d2	1.2	3.1		7.0	1.1			0.3	0.2		0.1	0.1
Delay (s)	3.5	8.3		18.7	16.0			30.4	29.5		29.0	28.2
Level of Service	A	A		B	B			C	C		C	C
Approach Delay (s)		8.2			16.1			30.0			28.6	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↖	↗		↖	↗
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99			1.00	0.96		1.00	0.97
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		1.00	1.00
Satd. Flow (prot)	1277	2589		1290	2565			1344	1121		1364	1133
Flt Permitted	0.13	1.00		0.13	1.00			0.91	1.00		0.98	1.00
Satd. Flow (perm)	181	2589		179	2565			1239	1121		1342	1133
Volume (vph)	29	1329	33	50	1299	51	15	30	108	9	96	55
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	31	1429	35	54	1397	55	16	32	116	10	103	59
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	13	0	0	11
Lane Group Flow (vph)	31	1463	0	54	1450	0	0	48	103	0	113	48
Conf. Peds. (#/hr)	113		60	60		113	16		25	25		16
Conf. Bikes (#/hr)			3			7			3			1
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		2			6			8				4
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	61.9	61.9		61.9	61.9			19.1	19.1		19.1	19.1
Effective Green, g (s)	62.4	62.4		62.4	62.4			19.6	19.6		19.6	19.6
Actuated g/C Ratio	0.69	0.69		0.69	0.69			0.22	0.22		0.22	0.22
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5	4.5		4.5	4.5
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	125	1795		124	1778			270	244		292	247
v/s Ratio Prot		0.57			c0.57							
v/s Ratio Perm	0.17			0.30				0.04	c0.09		0.08	0.04
v/c Ratio	0.25	0.81		0.44	0.82			0.18	0.42		0.39	0.19
Uniform Delay, d1	5.1	9.7		6.1	9.7			28.6	30.3		30.1	28.8
Progression Factor	0.41	0.46		1.80	1.80			1.00	1.00		1.00	1.00
Incremental Delay, d2	3.8	3.4		3.2	1.3			0.1	0.4		0.3	0.1
Delay (s)	5.9	7.9		14.1	18.7			28.8	30.7		30.4	28.9
Level of Service	A	A		B	B			C	C		C	C
Approach Delay (s)		7.8			18.6			30.2			29.9	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			